SAMSUNG

Samsung Galaxy Camera™
EK-GC120

User Manual

www.samsung.com

About this manual

This device provides Samsung's highest standard for quality mobile communication and entertainment. This user manual is specially designed to detail the device's functions and features.

- Please read this manual before using the device to ensure safe and proper use.
- Descriptions are based on the device's default settings.
- Images and screenshots may differ in appearance from the actual product.
- Content may differ from the final product, or from software provided by service providers or carriers, and is subject to change without prior notice. For the latest version of the manual, refer to the Samsung website, *www.samsung.com*.
- Available features and additional services may vary by device, software, or service provider.
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- Software, sound sources, wallpapers, images, and other media provided with this device are licensed for limited use. Extracting and using these materials for commercial or other purposes is an infringement of copyright laws. Users are entirely responsible for illegal use of media.
- You may incur additional charges for data services, such as messaging, uploading and downloading, auto-syncing, or using location services. To avoid additional charges, select an appropriate data tariff plan. For details, contact your service provider.
- This device supports 4G LTE networks.
- Default applications that come with the device are subject to updates and may no longer be supported without prior notice. If you have questions about an application provided with the device, contact a Samsung Service Center. For user-installed applications, contact service providers.
- Modifying the device's operating system or installing software from unofficial sources may result in device malfunctions and data corruption or loss. These actions are violations of your Samsung licence agreement and will void your warranty.

Instructional icons

Warning: situations that could cause injury to yourself or others

Caution: situations that could cause damage to your device or other equipment

Note: notes, usage tips, or additional information

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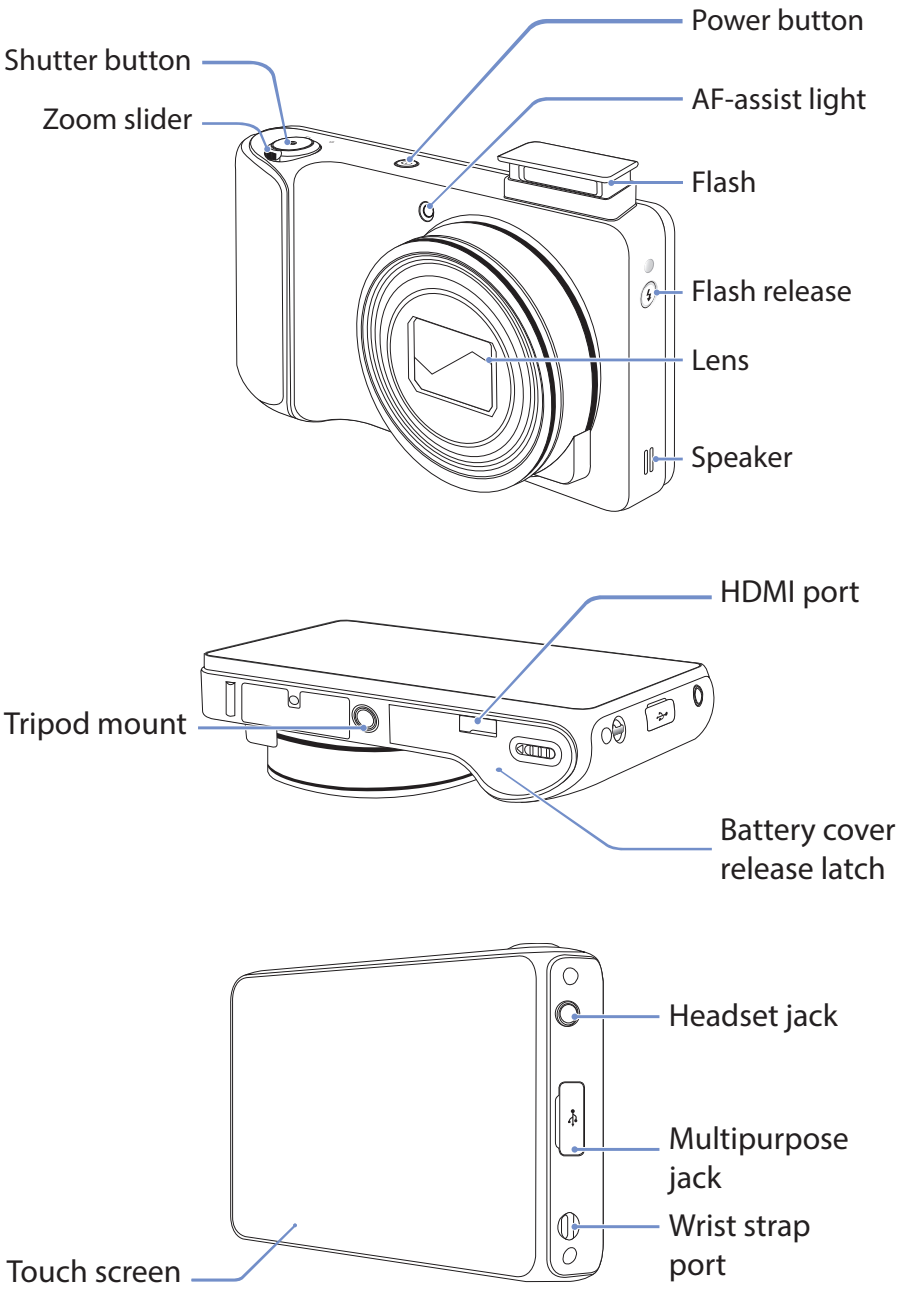
Getting started

Device layout



The microphone at the top of the device is active only when you use the voice search or take videos.

- Do not use a screen protector. This causes sensor malfunctions.
- Do not allow water to contact the touch screen. The touch screen may malfunction in humid conditions or when exposed to water.

Buttons

Button	Function
Power	• Press and hold to turn the device on or off. • Press and hold for 6-8 seconds to reset the device if it has fatal errors or hang-ups, or freezes. • Press to lock or unlock the device. The device goes into lock mode when the touch screen turns off.
Shutter	• In the camera application, half-press to focus on the subject. When the subject is in focus, the focus frame turns green. Press to take the photo. • From the Home screen, press and hold to turn the camera on.
Zoom	• In the camera application, turn left or right to zoom in or out. • Turn to adjust the device volume.

Package contents

Check the product box for the following items:

- Device
- Battery
- Wall/USB Charger
- Wrist Strap
- Quick Start Guide
- Product Safety and Warranty Brochure
- Quick Reference Guide
- ICI Brocure
- RF Brochure

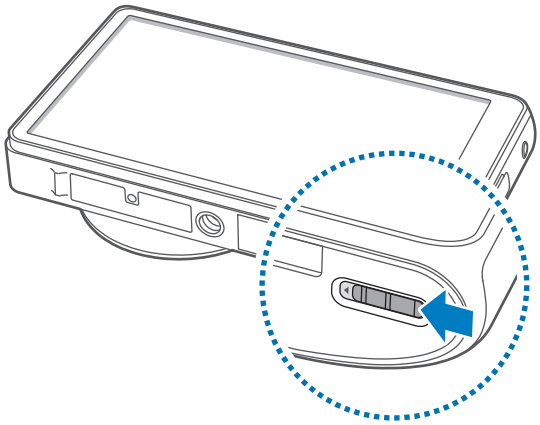
Use only approved software. Pirated or illegal software may cause damage or malfunctions, which are not covered by the warranty.

- The items supplied with the device and any available accessories may vary depending on the region or service provider.
- The supplied items are designed only for this device and may not be compatible with other devices.
- Appearances and specifications are subject to change without prior notice.
- You can purchase additional accessories from your local retailer. Make sure they are compatible with the device before purchase.
- Other accessories may not be compatible with your device.
- Use only approved accessories. Malfunctions caused by using unapproved accessories are not covered by the warranty service.
- Availability of all accessories is subject to change depending entirely on manufacturing companies. For more information about available accessories, refer to the Samsung website.
- Some TVs may not compatible with the device due to differing HDMI specifications.

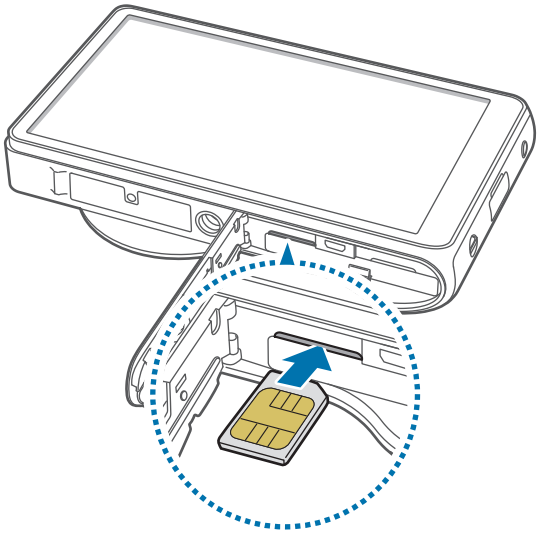
Installing the SIM card and battery

Insert the Verizon 4G LTE SIM card and the included battery.

1 Slide the battery cover release latch to the left to release the battery cover.



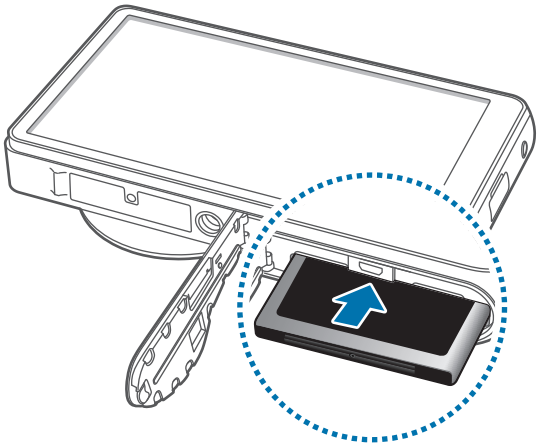
2 Insert the SIM card with the gold-colored contacts facing upwards.



- Do not insert a memory card into the SIM card slot. If a memory card happens to be lodged in the SIM card slot, take the device to a Samsung Service Center to remove the memory card.
- Use caution not to lose or let others use the SIM card. Samsung is not responsible for any damages or inconveniences caused by lost or stolen cards.

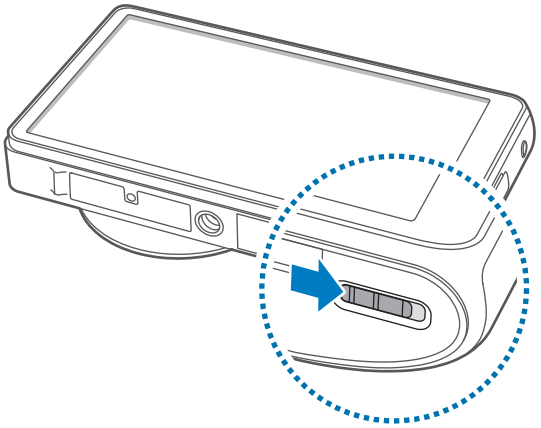
3 Push the SIM card into the slot until it locks in place.

4 Insert the battery.



Make sure to properly align the battery's gold-colored contacts when inserting the battery.

5 Replace the battery cover and slide the latch.

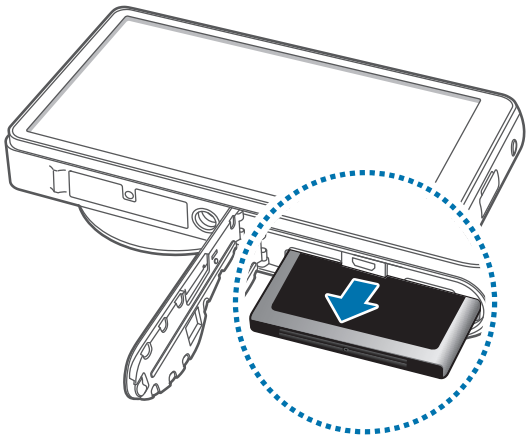


Removing the SIM card and battery

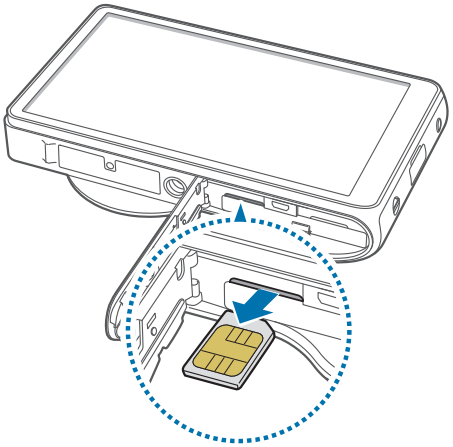
1 Slide the battery cover release latch to the left to release the battery cover.

2 Pull down on the battery release latch to eject the battery.

3 Pull out the battery.



4 Push the SIM card inward until it disengages from the device, and then pull it out.



Inserting an optional memory card

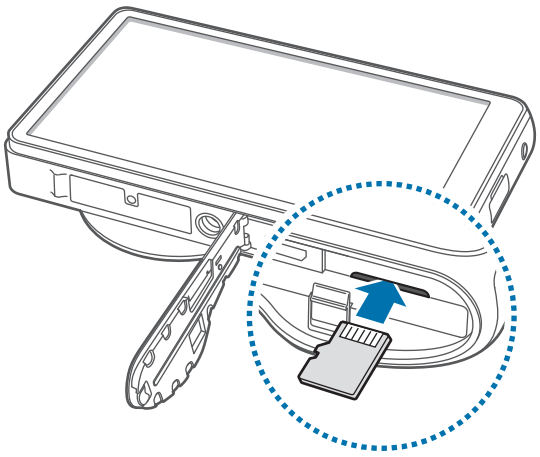
- Memory card sold seperately.
- Some memory cards may not be fully compatible with the device. Using an incompatible card may damage the device or the memory card, or corrupt the data stored in it.
- Use caution to insert the memory card right-side up.

- The device supports only the FAT file system for memory cards. When inserting a card formatted in a different file system, the device asks to reformat the memory card.
- Frequent writing and erasing of data shortens the lifespan of memory cards.
- When inserting a memory card into the device, the memory card's file directory appears in the **extSdCard** folder under the internal memory.

1 Slide the battery cover release latch to the left to release the battery cover.

2 Insert a memory card with the gold-colored contacts facing upwards.

3 Push the memory card into the slot until it locks in place.



4 Replace the battery cover and slide the latch.

Removing the memory card

Before removing the memory card, first unmount it for safe removal. On the Home screen, tap **Apps** → **Settings** → **Storage** → **Unmount SD card** → **OK**.

1 Slide the battery cover release latch to the left to release the battery cover.

2 Push the memory card inward until it disengages from the device, and then pull it out.

3 Replace the battery cover and slide the latch.

Do not remove the memory card while the device is transferring or accessing information. Doing so can cause data to be lost or corrupted or damage to the memory card or device. Samsung is not responsible for losses that result from the misuse of damaged memory cards, including the loss of data.

Formatting the memory card

A memory card formatted on a computer may not be compatible with the device. Format the memory card on the device.

On the Home screen, tap **Apps** → **Settings** → **Storage** → **Format SD card** → **Format SD card** → **Erase everything**.

Before formatting the memory card, remember to make backup copies of all important data stored on the device. The manufacturer's warranty does not cover loss of data resulting from user actions.

Charging the battery

Charge the battery before using it for the first time. Use the charger to charge the battery. A computer can be also used to charge the device by connecting them via the USB cable.

Use only approved chargers, batteries, and cables. Unapproved chargers or cables can cause the battery to explode or damage the device.

- When the battery power is low, the device emits a warning tone and displays a low battery power message.
- If the battery is completely discharged, the device cannot be turned on immediately when the charger is connected. Allow a depleted battery to charge for a few minutes before turning on the device.

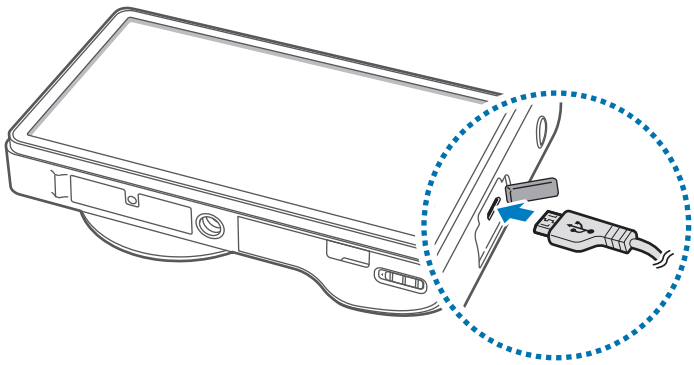
Charging with the charger

1 Connect the USB cable to the power adapter.

2 Connect the power adapter to an electrical outlet.

3 Connect the small end of the USB cable to the multipurpose jack of the device.

4 After fully charging, disconnect the device from the charger.



Connecting the charger improperly may cause serious damage to the device. Any damage caused by misuse is not covered by the warranty.

- The device can be used while it is charging, but it may take longer to fully charge the battery.
- If the device receives an unstable power supply while charging, the touch screen may not function. If this happens, unplug the charger from the device.
- While charging, the device may heat up. This is normal and should not affect the device's lifespan or performance. If the battery gets hotter than usual, the charger may stop charging.
- If the device is not charging properly, take the device and the charger to a Samsung Service Center.

Do not remove the battery before removing the charger. This may damage the device.

To save energy, unplug the charger when not in use. The charger does not have a power switch, so you must unplug the charger from the electric socket when not in use to avoid wasting power. The device should remain close to the electric socket while charging.

Checking the battery charge status

When you charge the battery while the device is off, the following icons will show the current battery charge status:

Charging

Fully charged

Reducing the battery consumption

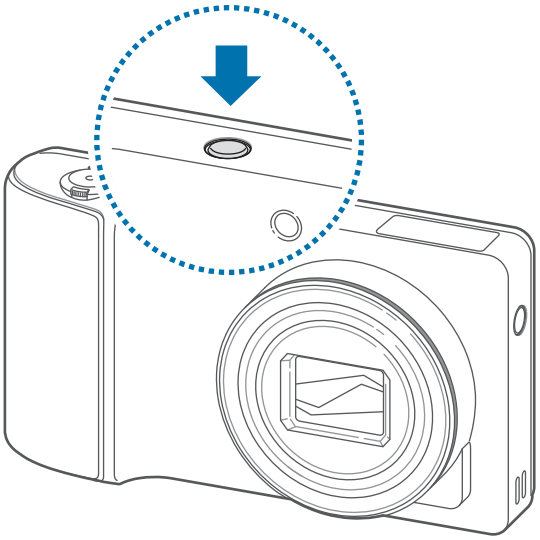
Your device provides options that help you save battery power. By customizing these options and deactivating features in the background, you can use the device longer between charges:

- When you are not using the device, switch to sleep mode by pressing the Power button.
- Close unnecessary applications with the task manager.
- Deactivate the Bluetooth feature.
- Deactivate the Wi-Fi feature.
- Deactivate auto-syncing of applications.
- Decrease the backlight time.
- Decrease the brightness of the display.
- Deactivate the fast power-on feature.
- Activate the automatic power off feature. (p. 115)

Turning the device on and off

When turning on the device for the first time, follow the on-screen instructions to set up your device.

Press and hold the Power button for a few seconds to turn on the device.



- Follow all posted warnings and directions from authorized personnel in areas where the use of wireless devices is restricted, such as airplanes and hospitals.
- Press and hold the Power button and tap **Airplane mode** to disable the wireless features.

To turn off the device, press and hold the Power button, and then tap **Power off**.

Adjusting the volume

Turn the Zoom button left or right to adjust the volume of notification tones, or to adjust the volume when playing music or video.

Switching to silent mode

Use one of the following methods:

- Press and hold the Power button, and then tap .
- Open the notifications panel at the top of the screen, and then tap **Sound**.

Camera

Basic functions

Use this application to take photos or videos.

Use **Gallery** to view photos and videos taken with the device. (p. 69)

Tap **Camera** on the Home screen.

The device automatically shuts off when unused.

Camera etiquette

- Do not take photos or videos of other people without their permission.
- Do not take photos or videos where legally prohibited.
- Do not take photos or videos in places where you may violate other people's privacy.

Taking photos

Half-press the Shutter button to focus on the subject. When the subject is in focus, the focus frame turns green. Press the Shutter button to take the photo.

Or, tap the image on the preview screen where the camera should focus. When the subject is in focus, the focus frame turns green. Tap to take the photo.

Taking videos

Tap to take a video. To stop recording, tap .

- Touch focus is not available in video mode.
- The zoom function may not be available when recording at the highest resolution.
- When using a memory card with a slow writing speed, the device may not be able to save the video properly. It may stop recording, or recorded video frames may become corrupted.
- Memory cards with slowing writing speeds do not support high-resolution video. To record high-resolution video, use memory cards with faster write speeds (micro SDHC Class10 or higher).
- The video frame size may appear smaller depending on video resolution and frame rate.
- You can take videos up to 20–25 minutes at one time.
- If the zoom function is activated when taking videos, the device may record the noise of the zoom operating. To decrease the zoom noise, activate the quiet zoom feature. (p. 47)

Taking photos while taking videos

Press the Shutter button to take photos while taking a video.

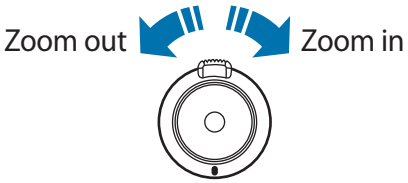
- Photos taken while taking a video are resized automatically, depending on the recorded video resolution.
- Photos taken while taking a video may be lower in quality than those taken normally.
- Photos taken while taking a video may look different from the moving images.

Viewing photos and videos

To view taken photos or videos, tap the image viewer. (p. 69)

Zooming in and out

Turn the Zoom button left or right to zoom in or out.



- The zoom function may not be available when shooting at the highest resolution.
- The zoom in/out effect is available when using the zoom feature while shooting a video.

Taking photos with the touch focus

Focus on different areas within the same composition using the touch focus.

Tap, or tap and drag the focus frame to the subject, half-press the Shutter button to focus on the selected area, and then press the Shutter button to take the photo.

Reducing device shake

Use the Optical Image Stabilizer (OIS) option to reduce or eliminate blurriness from device shake.

Tap MODE → **Expert** → **A** / **S** / **M** / **P**, and then from the preview screen, tap ⚙ → **Camera** → **OIS (anti-shake)** to help focus when the device is moving.

To use this feature in Camcorder mode, tap MODE → **Expert** → 🎥, and then from the preview screen, tap ⚙ → **Camcorder** → **OIS (anti-shake)**.

Before correction

After correction

- The Image Stabilization function may not function properly in the following conditions:
  - When moving the device to follow a moving subject.
  - If the device is shaking too much.
  - When the shutter speed is slow (for example, when taking photos in low-light conditions).
  - If the battery power is low.
  - When taking close-up photos.
- Using this function with a tripod may blur photos because of vibration from the OIS sensor. Deactivate this feature when using a tripod.
- The display may be blurry if the device is hit or dropped. When this happens, restart the device.

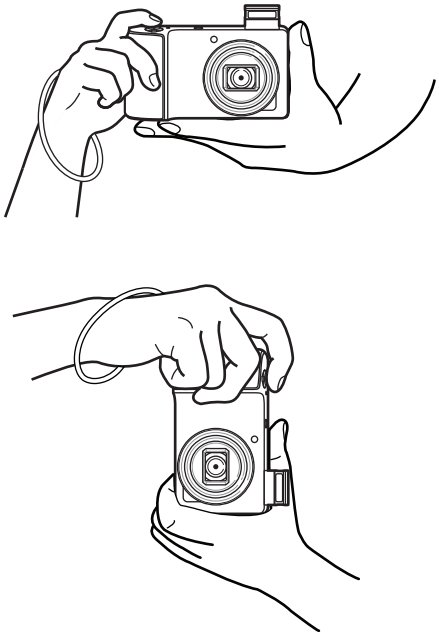
Learning icons

The icons displayed on the shooting screen provide information about the status of the device. The icons listed in the table below are the most common.

Icon	Meaning
ISO 100	ISO sensitivity
0	Exposure value
F2.8	Aperture
1/25s	Shutter speed
	Timer
	Flash
	Macro
	Metering
	White balance
	Continuous shooting
BKT	Bracket mode
	Voice control
	Geotagging
	Share shot
	Buddy photo share
	ChatON photo share

Tips for taking clearer photos

Holding the device correctly

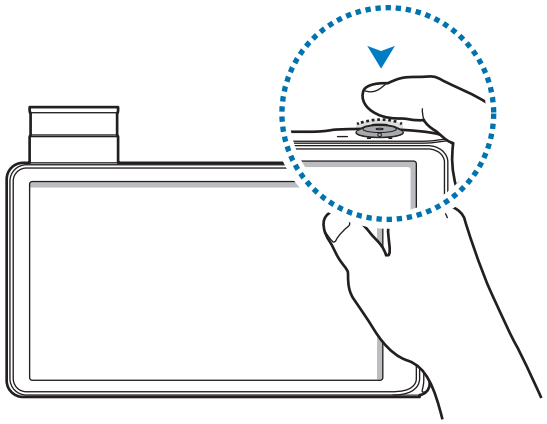


Make sure not to block the screen, lens, flash, or microphone.

Make sure not to expose the lens to direct sunlight. This may discolor the image sensor, or cause it to malfunction.

Half-pressing the Shutter button

Press the Shutter button halfway down to adjust the focus. The device adjusts the focus automatically, and the focus frame turns green. The focus frame turns red if not focused.



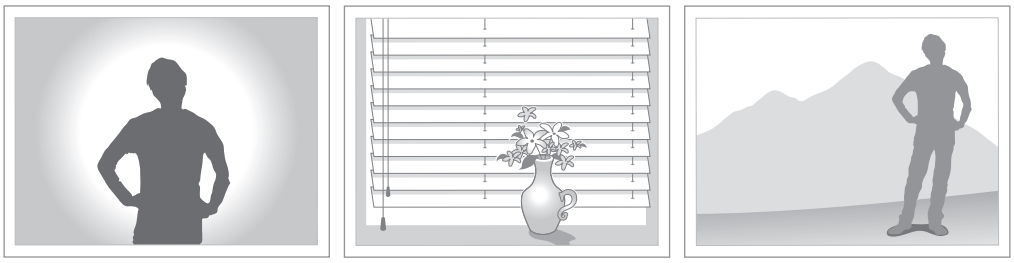
Reducing device shake

Set the Optical Image Stabilizer to reduce device shake optically. (p. 22)

Keeping the subject in focus

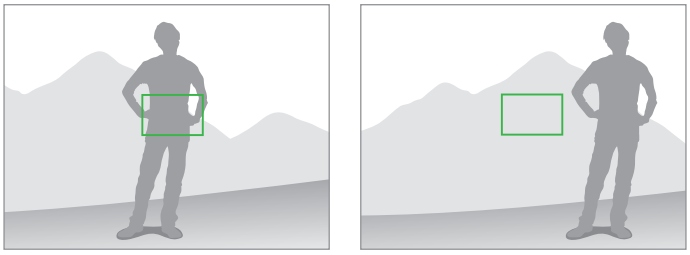
Focusing on the subject may be difficult in the following conditions:

- When the contrast between the subject and background is low. For example, the subject is wearing clothing that is similar in color to the background.
- The light behind the subject is too bright.
- The subject is shiny or reflective.
- The subject includes horizontal patterns, such as blinds.
- The subject is not positioned in the center of the frame.



Using the focus lock

Half-press the Shutter button to focus. When the subject is focused, you can change the composition. When you are ready, press the Shutter button to take the photo.

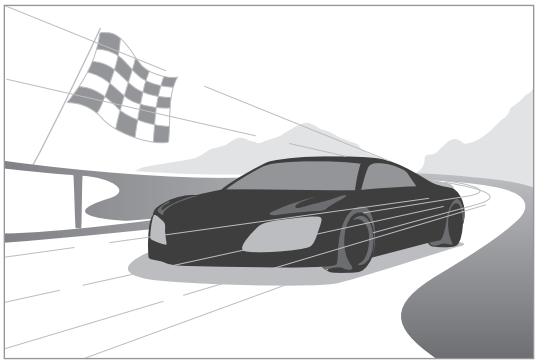


When taking photos in low-light conditions

- Turn the flash on to take photos in low-light conditions. (p. 39)
- Set ISO sensitivity options. (p. 40)

When subjects are moving rapidly

Use the continuous shooting option to take photos of moving subjects. (p. 29)



To take several photos continuously, use memory cards with faster write speeds (micro SDHC Class10 or higher).

Advanced functions

Changing Camera settings

Tap ❯ to quickly change Camera settings. The available options vary by mode.

- : Configure Camera settings.
- : Activate or deactivate the voice control to take photos.
- : Activate or deactivate the flash.
- : Use this to set delayed-time shots.
- : Select a resolution for videos.
- : Activate or deactivate the sharing options.

Auto

Use this to take photos with scene modes selected automatically by the device. The device determines the appropriate mode for the photo.

To use this mode, tap MODE → **Auto**.

- The device may not select a portrait mode depending on the subject's position or lighting.
- The device may not select the appropriate mode depending on the shooting conditions, such as device shake, lighting, or distance to the subject.
- In this mode, the device consumes more battery power due to constant changing of settings when selecting appropriate modes.

Smart

Use this to take photos with predefined settings for various scenes.

Beauty face

Use this to take photos with lightened faces for gentler images.

Tap MODE → **Smart** → **Beauty face**.

Press the Shutter button to take a photo, and the device automatically adjusts the photo, and then saves it.

Best photo

Use this to take multiple photos in a short time, and then choose the best photos among them.

Tap MODE → **Smart** → **Best photo**.

Press the Shutter button to take multiple photos. When **Gallery** opens, tap and hold thumbnails of photos to save, and then tap **Save**.

Continuous shot

Use this to take a series of photos of moving subjects.

Tap MODE → **Smart** → **Continuous shot**.

While holding the device steadily, press and hold the Shutter button to take several photos continuously.

To take several photos continuously, use memory cards with faster write speeds (micro SDHC Class10 or higher).

Best face

Use this to take multiple group shots at the same time and combine them to create the best possible image.

Tap MODE → **Smart** → **Best face**.

Press the Shutter button to take multiple photos. To get the best shot, hold the device steady and remain still while taking photos. When **Gallery** opens, tap the yellow frame on each face, and choose the best individual pose for the subject. After choosing a pose for each individual, tap **Done** to merge the images into a single photo, and save it.

Landscape

Use this to take photos of blue skies and landscapes with richer colors.

Tap MODE → **Smart** → **Landscape**.

Press the Shutter button to take a photo, and the device automatically adjusts the photo, and then saves it.

Macro

Use this to take photos of very close subjects.

Tap MODE → **Smart** → **Macro**.

Press the Shutter button to take a close-up photo.

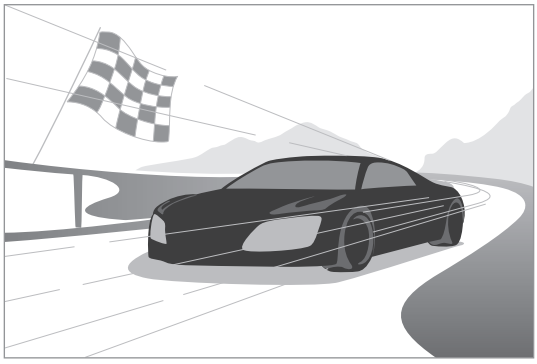
- Hold the device steadily to prevent blurry photos.
- Turn off the flash if the distance to the subject is too close.

Action freeze

Use this to take photos of subjects moving at high speed.

Tap MODE → **Smart** → **Action freeze**.

Press the Shutter button to take a photo of moving subjects.



Use in bright daylight is recommended.

Rich tone

Use this to take photos without losing details in bright and dark areas. The device automatically takes several photos with various exposure values, and then merges them into one photo.

Tap MODE → **Smart** → **Rich tone**.

While holding the device steadily, press the Shutter button to take multiple photos.

Without effect

With effect

- This feature may be affected by device shake, lighting, movement of the subject, and shooting environment.
- The flash is disabled in this feature.
- When taking a photo of moving subjects, an afterimage may appear.
- Using a tripod is recommended.

Panorama

Use this to take wide panoramic photos.

Tap MODE → **Smart** → **Panorama**.

Press the Shutter button to take a photo, and then move the device in any direction. When the blue frame aligns with the preview screen, the device automatically takes another shot in the panoramic sequence. To stop shooting, press the Shutter button again. Photos are automatically combined into one panoramic image.

- Avoid the following for best results:
  - Moving the device too quickly or too slowly.
  - Moving the device too little to take the next photo.
  - Moving the device at irregular speeds.
  - Shaking the device.
  - Changing the device direction while taking a photo.
  - Taking photos in low-light conditions.
  - Taking photos of moving subjects.
  - Taking photos where the brightness or color of the light changes.
- Photos are automatically saved, and shooting is stopped under the following conditions:
  - Changing the distance from the subject while shooting.
  - Moving the device too quickly.
  - Not moving the device.

- In Panorama mode, the zoom function is disabled. If the lens is zoomed in when selecting this mode, the device automatically zooms out to the default position.
- In Panorama mode, some device options are not available.
- The device may stop taking photos due to composition or movement within the scene.
- In Panorama mode, the device may not take the last scene entirely if you stop moving the device at the exact position where you want the scene to end. To take the entire scene, move the device slightly beyond the position you want the scene to end.

Waterfall

Use this to take photos of waterfalls.

Tap MODE → **Smart** → **Waterfall**.

The image may appear blurry due to the slow shutter speed when the camera takes photos. Make sure to use a tripod.

Silhouette

Use this to take photos of dark shapes against a light background.

Tap MODE → **Smart** → **Silhouette**.

To maximise the silhouette effect, take photos at a location that is bright.

Sunset

Use this to take photos of the sunset.

Tap MODE → **Smart** → **Sunset**.

Press the Shutter button to take a photo, and the device automatically adjusts the photo, and then saves it.

Night

Use this to take photos in low-light conditions, without using the flash.

Tap → **Smart** → **Night**.

While holding the device steadily, press the Shutter button to take multiple photos. Photos are automatically merged into a single photo.

The image may appear blurry due to the slow shutter speed when the camera takes photos. Make sure to use a tripod.

Fireworks

Use this to take photos of fireworks.

Tap → **Smart** → **Fireworks**.

While holding the device steadily, press the Shutter button to take a photo.

The image may appear blurry due to the slow shutter speed when the camera takes photos. Make sure to use a tripod.

Light trace

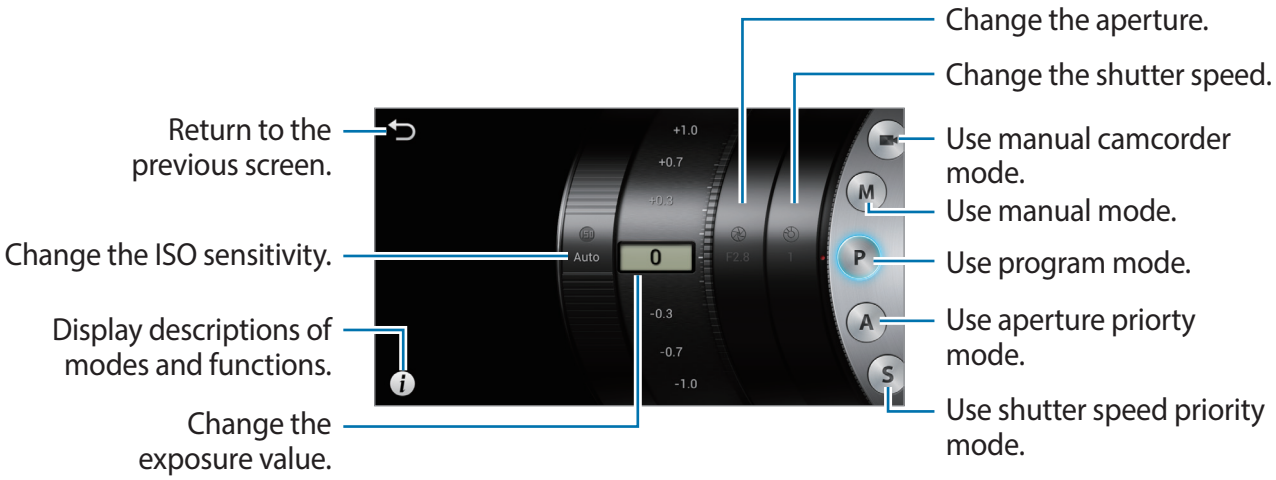
Use this to take photos of the light trailing in low-light conditions.

Tap → **Smart** → **Light trace**.

The image may appear blurry due to the slow shutter speed when the camera takes photos. Make sure to use a tripod.

Expert

Use this to take photos and videos with manual adjustment of ISO sensitivity, exposure value, aperture, and the shutter speed.



Using the manual camcorder mode

Use this to manually adjust camcorder settings, such as exposure value.

Tap → **Expert** → , and set exposure value.

You can take videos up to 20–25 minutes at one time.

Using the manual mode

Use this to manually adjust device settings, such as the aperture or shutter speed.

Tap → **Expert** → **M**, and set aperture, shutter speed, and ISO sensitivity.

Using the program mode

Use this to manually set ISO sensitivity or exposure value to take photos. The shutter speed and aperture are set automatically.

Tap → **Expert** → **P**, and set ISO sensitivity, and exposure value.

Using the aperture priority mode

Use this to manually set the aperture value to take photos. Shutter speed is set automatically.

Tap MODE → **Expert** → **A**, and set aperture, ISO sensitivity, and exposure value.

Using the shutter speed priority mode

Use this to manually set the shutter speed to take photos. Aperture is set automatically.

Tap MODE → **Expert** → **S**, and set shutter speed, ISO sensitivity, and exposure value.

About aperture

The aperture is a hole that lets light into the device, and widening or narrowing the aperture controls the amount of light that enters. The photo is brighter when the aperture value is smaller, and darker when the aperture value is larger.

Small aperture value

Large aperture value

About shutter speed

The shutter speed is the time taken for the shutter to open and close. Slow shutter speeds allow more light in, but moving subjects may blur. Faster shutter speeds allow less light in, but moving subjects are clearer.

Slow shutter speed

Fast shutter speed

Shooting options

Customize the device to take unique photos or videos. The available options vary by mode.

Selecting resolutions

Select a higher resolution to increase the pixels the photo or video can include. Selecting a higher resolution also increases the file size.

Setting the photo resolution

In Camera mode, tap ⚙ → **Camera** → **Photo size**, and select a photo resolution.

Setting the video resolution

In Camcorder mode, tap ⚙ → **Camcorder** → **Movie size**, and select a video resolution.

Setting the photo quality

Select a higher photo quality for better photos. Selecting a higher photo quality also increases the file size.

In Camera mode, tap ⚙ → **Camera** → **Quality**, and select a quality.

Using the timer

Use this for delayed-time shots.

In Camera mode, tap ⚙ → **Camera** → **Timer**, and select a time, and then press the Shutter button to start the timer.

To use this feature in Camcorder mode, tap ⚙ → **Camcorder** → **Timer**.

Press the Shutter button to cancel the timer.

Taking photos in low-light conditions

Preventing red-eye in portrait photos

When using the flash when taking a portrait photo in low-light conditions, a red-glow may appear in the subject's eyes.

In Camera mode, tap ⚙ → **Camera** → **Flash**, and select **Red-eye** or **Red-eye fix** to prevent red-eye.

Before correction

After correction

Using the flash

Use the flash when taking photos in low-light conditions, or when more light is needed in the photos.

Press the flash release to pop the flash up, and then tap ⚙ → **Camera** → **Flash** to set a flash option. The available options vary by mode.

- **Off**: Use this to turn the flash off.
- **Auto**: Use this to automatically use the flash. The flash fires when the subject or background is dark.
- **Red-eye**: Use this to prevent a red glow in the subject's eyes.
- **Fill in**: Use this to always use the flash.
- **Slow sync**: Use this to keep details of the background.
- **Red-eye fix**: Use this to correct a reg glow in the subject's eyes.

- Keep the flash retracted when not in use to avoid damage.
- Forcing the flash to open may cause damage to the device.

- Flash options are not available in some modes.
- If light from the flash is reflected, or if a substantial amount of dust is in the air, tiny spots may appear in the photo.

Adjusting the ISO sensitivity

The ISO sensitivity is the measure of a film's sensitivity to light as defined by the International Organization for Standardization (ISO). Select a higher resolution to take better photos and reduce blurriness when taking photos in low-light conditions without using the flash.

Tap MODE → **Expert** → **A** / **S** / **M** / **P**, and select an ISO sensitivity.

Selecting a higher ISO sensitivity may result in more image noise.

Using face detection

In Camera mode, tap ⚙ → **Camera** → **Face detection**, and select one of the following:

- **Normal**: Measures exposure on a human face. (p. 41)
- **Smile shot**: Recognizes and helps taking people's smiling faces. (p. 41)
- **Blink detection**: Detects closed eyes and automatically takes additional photos. (p. 42)

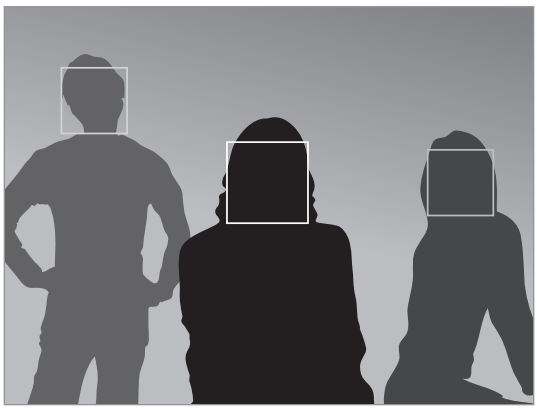
- When a face is detected, the device tracks the face automatically.
- This feature may not be effective in the following conditions:
  - The subject is too far from the device.
  - The lighting is too bright or too dark.
  - The subject is not facing the device.
  - The subject is wearing sunglasses or a mask.
  - The subject's facial expression changes drastically.
  - The subject is backlit, or the lighting conditions are unstable.
- This feature may not be available in some modes and settings.
- Depending on the selected option, some settings may not be available.

Detecting faces

The device automatically detects multiple human faces.

In Camera mode, tap ⚙ → **Camera** → **Face detection** → **Normal**.

Aim the device at a human subject. When the device detects a human face, a white frame appears around the face. Press the Shutter button to take a photo.



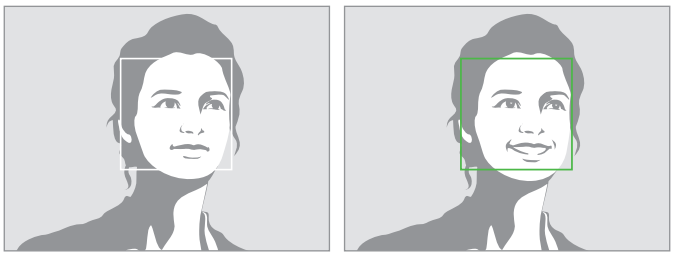
The closer you are to the subjects, the quicker the device detects faces.

Taking a smile shot

The device automatically detects a smiling face, and releases the shutter.

In Camera mode, tap ⚙ → **Camera** → **Face detection** → **Smile shot**.

Aim the device at a human subject, and press the Shutter button. When the device detects a smiling face, the device automatically takes the photo.



Face detected Smile detected

Detecting eye blinking

If the device detects closed eyes, it automatically takes more photos in succession.

In Camera mode, tap → **Camera** → **Face detection** → **Blink detection**.

Aim the device at a human subject. When the device detects a human face, a white frame appears around the face. If the eyes are closed at the exact moment when the Shutter button is pressed, the device automatically takes more photos in succession.

Adjusting the exposure value (EV) manually

Photos or videos may be too bright or too dark, depending on the intensity of the light source. Adjust the exposure value to take better photos or videos.

Tap → **Expert** → **A** / **S** / **P** / , and adjust the exposure value.

Darker (-) Neutral (0) Brighter (+)

- When taking a photo, if the appropriate exposure value cannot be decided, use the bracketed photo option to take multiple photos with different exposure values.
- Taking photos with higher exposure value may result in blurry photos, due to longer shutter speed.

Changing metering methods

The metering mode refers to the method the device measures the quantity of light. The brightness and lighting of the photos may vary depending on the selected metering method.

In Camera mode, tap ⚙ → **Camera** → **Metering**, and select a metering method.

To use this feature in Camcorder mode, tap ⚙ → **Camcorder** → **Metering**.

- **Multiple**: The device divides the frame into several areas, and then measures the light value of each area.
- **Spot**: The device measures the light value at the center of the frame.
- **Center-weighted**: The device measures the background light in the center of the scene.

This feature is only visible in Expert mode.

Selecting white balance settings

The colors of photos or videos depend on the type or quality of the light source. Select white balance settings for realistic colors of photos or videos.

In Camera mode, tap ⚙ → **Camera** → **WB (Light Source)** and select a white balance setting.

To use this feature in Camcorder mode, tap ⚙ → **Camcorder** → **WB (Light Source)**.

- **Auto WB**: Use this to automatically set white balance.
- **Daylight**: Use this for sunny days.
- **Cloudy**: Use this for cloudy days or in shadows.
- **Fluorescent_H**: Use this under daylight fluorescent or 3-way fluorescent lights.
- **Fluorescent_L**: Use this under white fluorescent lights.
- **Tungsten**: Use this under incandescent bulbs or halogen lamps.
- **Custom**: Use this to set custom white balance.

This feature is only visible in Expert mode.

Setting customized white balance

Set a customized white balance by taking a photo of a white surface, such as a piece of white paper, under the light source of the subject.

In Camera mode, tap ⚙ → **Camera** → **WB (Light Source)** → **Custom set**.

To use this feature in Camcorder mode, tap ⚙ → **Camcorder** → **WB (Light Source)** → **Custom set**.

Aim the lens at a piece of white surface, and then press the Shutter button to set a customized white balance.

This feature is only visible in Expert mode.

Taking photos continuously

Use the continuous shooting option to take photos of fast moving subjects, such as moving cars or gestures of subjects.

In Camera mode, tap ⚙ → **Camera** → **Drive** and select an option.

- **Continuous shot**: Use this to take a series of photos of moving subjects.

- This feature is only visible in Expert mode.
- When taking photos with continuous shooting option, the flash, filter effects, and face detection options are disabled.
- Saving photos may take longer depending on memory card capacity and performance.

Taking bracketed photos

Use the bracketed photo option to take several photos of the same subject with different exposure values.

In Camera mode, tap ⚙ → **Camera** → **Drive** → **AE BKT** to take several photos with different exposure values.

- This feature is only visible in Expert mode.
- When taking bracketed photos, the flash, filter effects, and face detection options are disabled.
- Saving photos may take longer depending on memory card capacity and performance.
- Using a tripod is recommended.

Taking photos or videos with filter effects

Use the filter effects to take unique photos or videos.

Tap and select a filter effect. Not all of the following options are available in both Camera and Camcorder modes. The available options vary by mode.

- **No effect**: No effect.
- **Sepia**: This effect red-shifts the background scenery.
- **Black and white**: This effect makes the image black and white.
- **Negative**: This effect makes the image look like a negative exposure.
- **Old photo**: This effect makes the image look like an old-style photograph.
- **Sunshine**: This effect makes the image look as if it was taken under bright sunlight.
- **Vintage**: This effect gives the image a vintage look and feel.
- **Retro**: This effect applies a sepia tone effect.
- **Faded colors**: This effect fades the color of the image.
- **Nostalgia**: This effect applies a warm and cheerful effect.
- **Comic**: This effect makes the image look like a comic book drawing.
- **Pastel sketch**: This effect makes the image look like a pastel sketch.
- **Gothic noir**: This effect makes the image look like a black and white comic strip.
- **Impressionist**: This effect makes the image look like an impressionist painting.

When applying filter effects, photos' resolution changes to 1920x1080, and videos' resolution changes to 1280x720.

Configuring settings for Camera

Tap → to configure settings for Camera. The available options vary by mode.

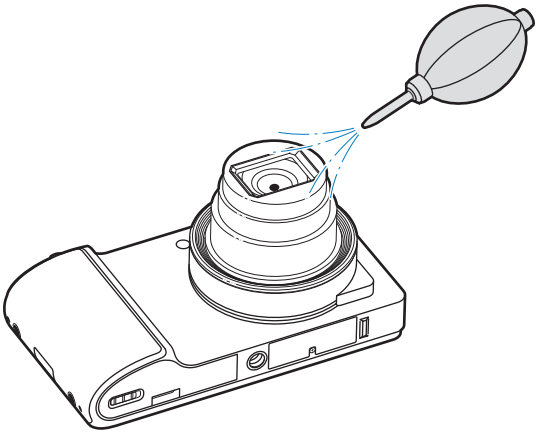
- **Photo size**: Select a resolution for photos. Use higher resolution for higher quality. Higher resolution photos take up more memory.
- **Flash**: Activate or deactivate the flash.
- **Timer**: Use this for delayed-time shots.
- **Detection display**: In Auto mode, display scenes that are automatically detected on the screen when half-pressing the Shutter button.
- **Share shot**: Send a photo directly to another device via Wi-Fi Direct. Share shot can only be used between devices that support the share shot feature.
- **Buddy photo share**: Set the device to recognize a person's face that you have tagged in a photo and send it to that person. Face recognition may fail depending on the face angle, face size, skin color, facial expression, light conditions, or accessories the subject is wearing.
- **ChatOn photo share**: Send a photo directly to another device via **ChatON**.
- **AF/Shutter sound**: Adjust the shutter and auto focus sounds.
- **Beep**: Activate or deactivate beep sounds.
- **Description**: Display mode descriptions.
- **Guide line**: Display viewfinder guides to help composition when selecting subjects.
- **Display brightness**: Set the brightness of the screen.
- **Review**: Briefly display photos taken.
- **Date/time imprint**: Use this to imprint the date and/or the time on the photos when taking them.
- **GPS Tag**: Attach a GPS location tag to the photo.

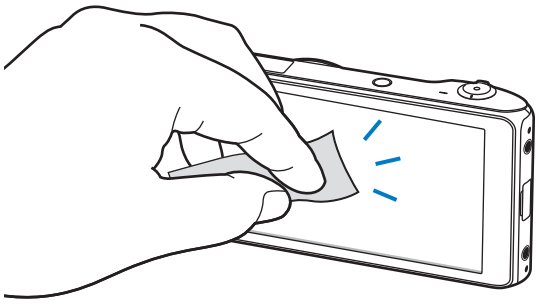
- To improve GPS signals, avoid shooting in locations where the signal may be obstructed, such as between buildings or in low-lying areas, or in poor weather conditions.
- Your location may appear on your photos when you upload them to the Internet. To avoid this, deactivate the GPS tag setting.

- **Voice control**: Activate or deactivate voice control to take photos.
- **AF lamp**: Use this to activate the AF-assist light in low-light conditions.
- **Power-on mode**: Select the default camera mode that launches when the device is turned on.
- **Storage**: Select the memory location for storage.
- **Reset**: Reset the camera settings.
- **WB (Light Source)**: Select an appropriate white balance, so images have a true-to-life color range. The settings are designed for specific lighting situations. These settings are similar to the heat range for white-balance exposure in professional cameras.
- **Focus**: Select a focus mode. **Auto focus (Normal)** is device-controlled. **Macro** is for very close objects.
- **Drive**: Use this to set frame rate or bracketing.
- **Focus area**: Select a focus area.
- **Face detection**: Select a face detection mode. **Normal** measures exposure on a human face. **Smile shot** recognizes and helps taking people's smiling faces. **Blink detection** detects closed eyes and automatically takes additional photos.
- **Quality**: Set the quality level for photos. Higher quality images require more storage space.
- **Auto Contrast**: Use this for automatic contrast. Automatic contrast defines contrast levels without manual input.
- **Metering**: Select a metering method. This determines how light values are calculated. **Center weighted** measures background light in the center of the scene. **Spot** measures the light value at a specific location. **Multi** averages the entire scene.
- **Sharpness**: Use this to sharpen or soften the edges of the photos.
- **Contrast**: Use this to increase or decrease the brightness.
- **Saturation**: Use this to increase or decrease the colors.
- **OIS (anti-shake)**: Activate or deactivate anti-shake. Anti-shake helps focus when the device is moving.
- **Movie size**: Select a resolution for videos. Use higher resolution for higher quality. Higher resolution videos take up more memory.
- **Smart scene**: Use this for taking videos with a scene mode selected automatically by the device.
- **Sound**: Use this to decrease zoom noise when taking videos.

Cleaning the device

Use a blower brush (sold separately) to remove dust, and then wipe the lens gently with a soft cloth. If any dust remains, apply lens cleaning liquid to a lens cleaning paper, and wipe gently.





Do not press on the lens cover, or use a blower brush on the lens cover.

Basics

Indicator icons

The icons displayed at the top of the screen provide information about the status of the device. The icons listed in the table below are most common.

Icon	Meaning
	No signal
	Signal strength
	Wi-Fi connected
	Bluetooth feature activated
	GPS activated
	Synced with the web
	Connected to computer
	No SIM card
	New text or multimedia message
	Alarm activated
	Silent mode activated
	Vibration mode activated
	Airplane mode activated
	Error occurred or caution required
	Battery power level

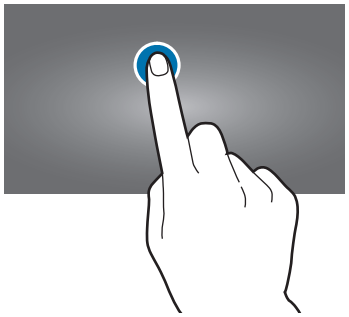
Using the touch screen

- Do not allow the touch screen to come into contact with other electrical devices. Electrostatic discharges can cause the touch screen to malfunction.
- Do not allow the touch screen to contact water. The touch screen may malfunction in humid conditions or when exposed to water.
- To avoid damaging the touch screen, do not tap it with anything sharp or apply excessive pressure to it with your fingertips.
- Leaving the touch screen idle for extended periods may result in afterimages (screen burn-in) or ghosting. Turn off the touch screen when you do not use the device.

Finger gestures

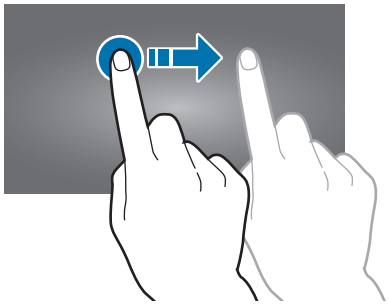
Tapping

To open an application, to select a menu item, to press an on-screen button, or to enter a character using the on-screen keyboard, tap it with a finger.



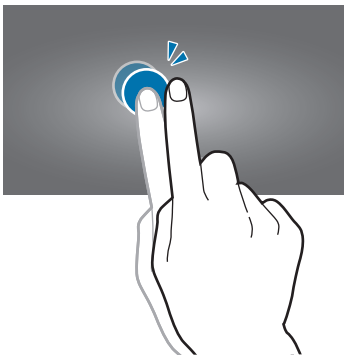
Dragging

To move an icon, thumbnail, or preview to a new location, tap and hold it and drag it to the target position.



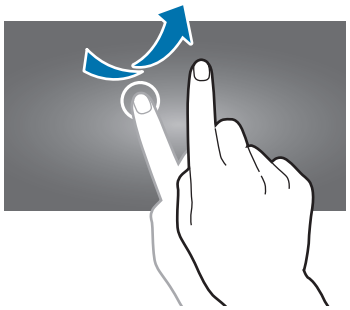
Double-tapping

Double-tap on a webpage, map, or image to zoom in. Double-tap again to zoom out.



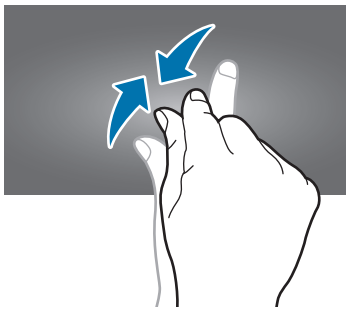
Flicking

Flick left or right on the Home screen or the Applications screen to see another panel. Flick up or down to scroll through a webpage or a list, such as contacts.



Pinching

Spread two fingers apart on a webpage, map, or image to zoom in. Pinch to zoom out.



Control motions

Simple motions allow easy control of the device.

Before using motions, make sure the motion feature is activated. On the Home screen, tap **Apps** → **Settings** → **Motion**, and then drag the **Motion** switch to the right.

Rotating the screen

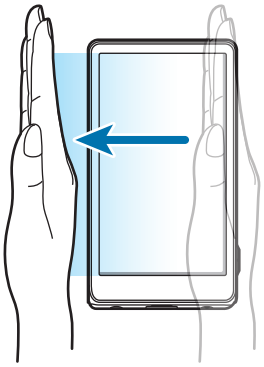
Many applications allow display in either portrait or landscape orientation. Rotating the device causes the display to automatically adjust to fit the new screen orientation.

To prevent the display from rotating automatically, open the notifications panel and deselect **Screen rotation**.

- Some applications do not allow screen rotation.
- Some applications display a different screen depending on the orientation. The calculator turns into a scientific calculator when rotated to landscape.

Sweeping

With the side of your hand swipe the screen right to left or vice versa to capture a screenshot. The image is saved in **Gallery** → **Screenshots**.

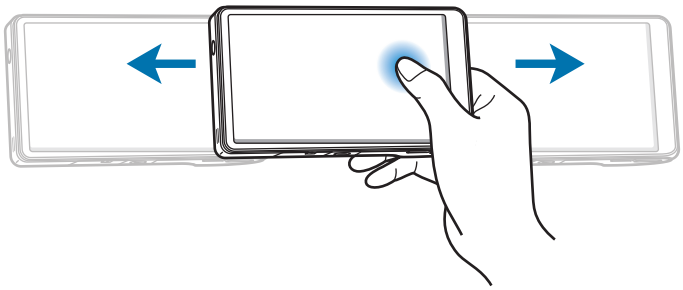


Covering

Cover the screen with a palm to pause media playback. Move it away from the screen to resume.

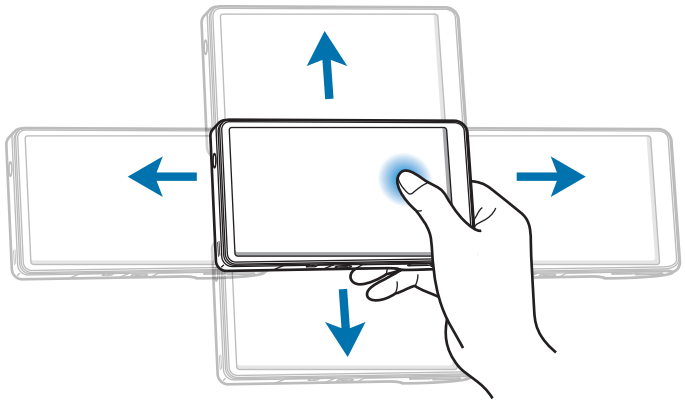
Panning to move

Tap and hold an item, and then move the device to the left or right to move the item to another panel on the Home screen or the Applications screen.



Panning to browse

When an image is zoomed in, tap and hold a point on the screen, and then move the device in any direction to browse the image.



Notifications

Notification icons appear on the status bar at the top of the screen to report new messages, calendar events, device status, and more. Drag down from the status bar to open the notifications panel. Scroll through the list to see additional alerts. To close the notifications panel, drag up the bar that is at the bottom of the screen.

From the notifications panel, you can view your device's current status and use the following options:

- **Bluetooth**: Activate or deactivate the Bluetooth feature.
- **GPS**: Activate or deactivate the GPS feature.
- **Sound**: Activate or deactivate silent mode. You can then change to vibrate or mute your device in silent mode.
- **Mobile data**: Activate or deactivate the data connection.
- **Screen rotation**: Allow or prevent the interface from rotating when you rotate the device.
- **Airplane mode**: Allows you to use many of your device's features, such the Camera, Games, and more, when you are in an airplane or in any other area where data is prohibited.
- **Power saving**: Activate or deactivate power-saving mode.
- **Driving mode**: Enable incoming notifications to be read out automatically.
- **AllShare Cast**: Activate or deactivate the AllShare Cast feature.

The available options may vary depending on the region or service provider.

Home screen

The Home screen is the starting point to access all of the device's features. It displays indicator icons, widgets and shortcuts to applications.

The Home screen can have multiple panels. To view other panels, flick left or right.

Rearranging items

Adding an application icon

On the Home screen, tap **Apps**, tap and hold an application icon, and then drag it into a panel preview.

Adding an item

Customize the Home screen by adding shortcuts, widgets, or folders.

On the Home screen, tap and hold the empty area on the Home screen, and then select one of the following categories:

- **Apps and widgets**: Add widgets to the Home screen.
- **Folder**: Create a new folder.
- **Page**: Create a new page.

Then, select an item and drag it to the Home screen.

Moving an item

Tap and hold an item and drag it to a new location. To move it to another panel, drag it to the side of the screen.

Removing an item

Tap and hold an item, and drag it to the Trash bin that appears at the bottom of the Home screen. When the rubbish bin turns red, release the item.

Rearranging panels

Adding a new panel

Tap → **Edit page**, and then tap .

Moving a panel

Tap → **Edit page**, tap and hold a panel preview, and then drag it to a new location.

Removing a panel

Tap → **Edit page**, tap and hold a panel preview, and then drag it to the rubbish bin at the bottom of the screen.

Setting wallpaper

Set an image or photo stored in the device as wallpaper for the Home screen.

On the Home screen, tap → **Set wallpaper** → **Home screen**, and then select one of the following:

- **Gallery**: See photos taken by the device's camera or images downloaded from the Internet.
- **Live wallpapers**: See animated images.
- **Wallpapers**: See wallpaper images.

Then, select an image and tap **Set wallpaper**. Or, select an image, resize it by dragging the frame, and then tap **Done**.

Using applications

This device can run many different types of applications, ranging from media to Internet applications.

Opening an application

On the Home screen or the Applications screen, tap an application icon to open it.

Opening from recently-used applications

Tap and hold the Home icon to open the list of recently-used applications.

Select an application icon to open.

Closing an application

Close applications not in use to save battery power and maintain device performance.

Tap and hold the Home icon, tap **Task manager**, and then tap **End** next to an application to close it. To close all running applications, tap **End all**.

Applications screen

The Applications screen displays icons for all applications, including any new applications installed.

On the Home screen, tap **Apps** to open the Applications screen.

To view other panels, flick left or right.

Rearranging applications

Tap → **Edit**, tap and hold an application, and then drag it to a new location. To move it to another panel, drag it to the side of the screen.

Organizing with folders

Put related applications together in a folder for convenience.

Tap → **Edit**, tap and hold an application, drag it to **Create folder**, and then enter a folder name. Put applications into the new folder by dragging, and then tap **Save** to save the arrangement.

Rearranging panels

Pinch on the screen, tap and hold a panel preview, and then drag it to a new location.

Installing applications

Use application stores, such as **Samsung Apps**, to download and install applications.

Uninstalling applications

- Tap → **Uninstall**, and then select an application to uninstall it.
- Tap → **Edit**, tap and hold an application, and then drag it to the rubbish bin at the bottom of the screen.

Default applications that come with the device cannot be uninstalled.

Sharing applications

Share downloaded applications with other users via email, Bluetooth, or other methods.

Tap → **Share app**, select applications, and then select a sharing method. The next steps vary depending on the method selected.

Entering text

Use the Samsung keyboard or the Google voice input to enter text.

Text entry is not supported in some languages. To enter text, you must change the input language to one of the supported languages.

Changing the keyboard type

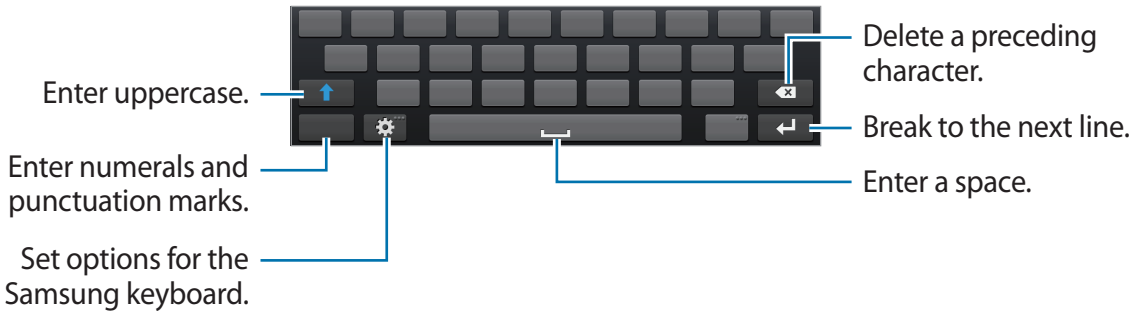
Tap any text field, open the notifications panel at the top of the screen, tap **Choose input method**, and then select the type of keyboard to use.

Using the Samsung keyboard

Changing the keyboard layout

Tap → **Portrait keyboard types**, and then tap **Qwerty keyboard** or **3x4 keyboard**.

On the 3x4 keyboard, a key has three or four characters. To enter a character, tap repeatedly the key corresponding to the character.


Enter uppercase.
Enter numerals and punctuation marks.
Set options for the Samsung keyboard.
Delete a preceding character.
Break to the next line.
Enter a space.

Entering uppercase

Tap before entering a character. For all caps, tap it twice.

Changing language keyboards

Slide the space key left or right to change language keyboards.

Entering text by voice

When **Google voice typing** is activated, the voice recognition screen appears. Speak a text into the microphone. When you are done, tap to return to the text.

To change the text, tap the underlined text and select a word or phrase among the dropdowns.

Copying and pasting

Tap and hold over text, drag or to select more or less text, and then tap **Copy** or **Cut**. The selected text is copied to the clipboard.

To paste it into a text entry field, place the cursor at the point where it should be inserted, and then tap → **Paste**.

Connecting to a Wi-Fi network

Connect the device to a Wi-Fi network to use the Internet or share media files with other devices. (p. 110)

Turning Wi-Fi on and off

Open the notifications panel, and then tap **Wi-Fi** to turn it on or off.

- Your device uses a non-harmonized frequency and is intended for use in all European countries. The WLAN can be operated in the EU without restriction indoors but cannot be operated outdoors.
- Turn off Wi-Fi to save the battery when not in use.

Joining Wi-Fi networks

On the Applications screen, tap **Settings** → **Wi-Fi**, then drag the **Wi-Fi** switch to the right.

Select a network from the list of detected Wi-Fi networks, enter a password if necessary, and then tap **Connect**. Networks that require a password appear with a lock icon. After the device connects to a Wi-Fi network, the device will automatically connect to it any time it is available.

Adding Wi-Fi networks

If the desired network does not appear in the networks list, tap **Add Wi-Fi network** at the bottom of the networks list. Enter the network name in **Network SSID**, select the security type and enter the password if it is not an open network, and then tap **Save**.

Forgetting Wi-Fi networks

Any network that has ever been used, including the current network, can be forgotten so the device will not automatically connect to it. Select the network in the networks list, and then tap **Forget**.

Setting up accounts

Google applications, such as **Play Store**, require a Google account, and **Samsung Apps** requires a Samsung account. Create Google and Samsung accounts to have the best experience with the device.

Adding accounts

Follow the instructions that appear when opening a Google application without signing in to set up a Google account.

To sign in with or sign up for a Google account, on the Applications screen, tap **Settings** → **Add account** → **Google**. After that, tap **New** to sign up, or tap **Existing**, and then follow on-screen instructions to complete the account setup. More than one Google account can be used on the device.

Set up a Samsung account as well.

Removing accounts

On the Applications screen, tap **Settings**, select an account name under **Accounts**, select the account to remove, and then tap **Remove account**.

Transferring files

Move audio, video, image, or other types of files from the device to the computer, or vice versa.

Connecting with Samsung Kies

Samsung Kies is a computer application that manages media libraries, contacts, and calendars, and syncs them with Samsung devices. Download the latest Samsung Kies from the Samsung website.

1 Connect the device to the computer using the USB cable.

Samsung Kies launches on the computer automatically. If Samsung Kies does not launch, double-click the Samsung Kies icon on the computer.

2 Transfer files between your device and the computer.

Refer to the Samsung Kies help for more information.

Connecting with Windows Media Player

Ensure that Windows Media Player is installed on your computer.

1 Connect the device to the computer using the USB cable.

2 Open Windows Media Player and synchronize music files.

Connect as a media device

Connect the device to a computer and access media files stored on your device.

1 Connect the device to a computer using the USB cable.

2 Open the notifications panel, and then tap **Connected as a media device** → **Media device (MTP)**.

3 Transfer files between your device and the computer.

Connect as a camera device

Connect the device to a computer as a camera and access files in your device.

Use this USB connection mode when your computer does not support the media transfer protocol (MTP) or does not have the USB driver for your device installed.

1 Connect the device to a computer using the USB cable.

2 Open the notifications panel, and then tap **Connected as a media device** → **Camera (PTP)**.

3 Transfer files between your device and the computer.

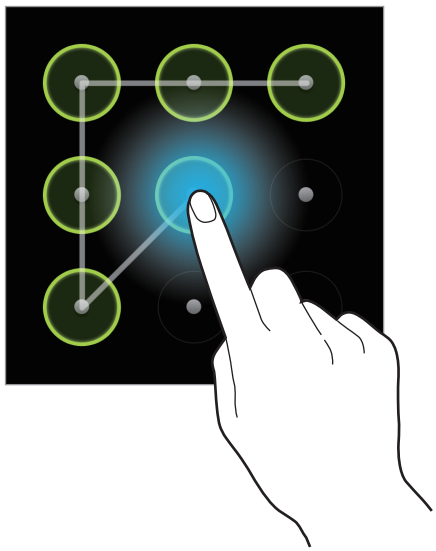
Securing the device

Prevent others from using or accessing personal data and information stored in the device by using the security features. The device requires a preset pattern, PIN, or password whenever unlocking it.

Setting a pattern

On the Applications screen, tap **Settings** → **Lock screen** → **Screen lock** → **Pattern**.

Draw a pattern by connecting four dots or more, and then draw the pattern again to verify it. Set a backup unlock PIN.



Setting a PIN

On the Applications screen, tap **Settings** → **Lock screen** → **Screen lock** → **PIN**.

Enter at least four numbers, and then enter the password again to verify it.

Setting a password

On the Applications screen, tap **Settings** → **Lock screen** → **Screen lock** → **Password**.

Enter at least four characters including numbers and symbols, and then enter the password again to verify it.

Unlocking the device

Turn on the screen by pressing the Power button, and enter the pattern, PIN, or password.

If the unlock code is forgotten, take the device to a Samsung Service Center to reset it.

Upgrading the device

The device can be upgraded to the latest software.

This feature may not be available depending on the region or service provider.

Upgrading with Samsung Kies

Launch Samsung Kies and connect the device to the computer. Samsung Kies automatically recognizes the device and shows available updates in a dialogue box, if any. Click the Update button in the dialogue box to start upgrading. Refer to the Samsung Kies help for details on how to upgrade.

- Do not turn off the computer or disconnect the USB cable while the device is upgrading.
- While upgrading the device, do not connect other media devices to the computer. Doing so may interfere with the update process.

Upgrading over the air

The device can be directly upgraded to the latest software by the firmware over-the-air (FOTA) service.

On the Applications screen, tap **Settings** → **About device** → **Software update** → **Update**.

Media

Gallery

Use this application to view images and videos.

Tap **Gallery** on the Applications screen.

- Some file formats are not supported depending on the software installed on the device.
- Some files may not play properly depending on how they are encoded.

Viewing images

Launching **Gallery** displays available folders. When another application, such as **Email**, saves an image, the download folder is automatically created to contain the image. Likewise, capturing a screenshot automatically creates the **Screenshots** folder. Select a folder to open it.

In a folder, images are displayed by creation date. Select an image to view it in full screen.

Scroll left or right to view the next or previous image.

Zooming in and out

Use one of the following methods to zoom in an image:

- Double-tap anywhere to zoom in.
- Spread two fingers apart on any place to zoom in. Pinch to zoom out, or double-tap to return.

Playing videos

Video files show the icon on the preview. Select a video to watch it, and **Video Player** launches.

Editing images

When viewing an image, tap and use the following functions:

- **Edit**: Edit the image.
- **Slideshow**: Start a slideshow with the images in the current folder.
- **Favorites**: Add to the favorites list.
- **Face tag**: Register faces in photos as face tags.
- **Copy to clipboard**: Copy to clipboard.
- **Rotate left**: Rotate counter-clockwise.
- **Rotate right**: Rotate clockwise.
- **Crop**: Resize the blue frame to crop and save the image in it.
- **Set as**: Set the image as wallpaper or contact image.
- **Buddy photo share**: Set the device to recognize a person's face you have tagged in a photo and send it to that person. Face recognition may fail depending on face angle, face size, skin color, facial expression, light conditions, or accessories the subject is wearing.
- **Print**: Print via a USB or Wi-Fi connection. The device is only compatible with some Samsung printers.
- **Show on map**: View the shooting location on the map. When taking a photo or video, enable geotagging to attach GPS location tag with the photo or video. If there is no GPS location tag to attach, this option does not appear.
- **Rename**: Rename the file.
- **Scan for nearby devices**: Search for devices that have media sharing activated.
- **Details**: View image details.

Deleting images

Use one of the following methods:

- In a folder, tap → **Select item**, select images, and then tap .
- When viewing an image, tap .

Sharing images

Use one of the following methods:

- In a folder, tap → **Select item**, select images, and then tap to send them to others.
- When viewing an image, tap to send it to others.

Setting as wallpaper

When viewing an image, tap → **Set as** to set the image as wallpaper or to assign it to a contact.

Tagging faces

When viewing an image, tap → **Face tag** → **On**. A yellow frame appears around the recognized face. Tap the face, tap **Add name**, and then select or add a contact.

When the face tag appears on an image, tap the face tag and use available options, such as sending messages or emails.

Face recognition may fail depending on the face angle, face size, skin color, facial expression, light conditions, or accessories the subject is wearing.

Paper Artist

Use this application to make images look like illustrations with fun effects or frames.

Tap **Paper Artist** on the Applications screen.

Use artistic tools to edit an image. The edited image is saved in **Gallery** → **Paper Pictures** folder.

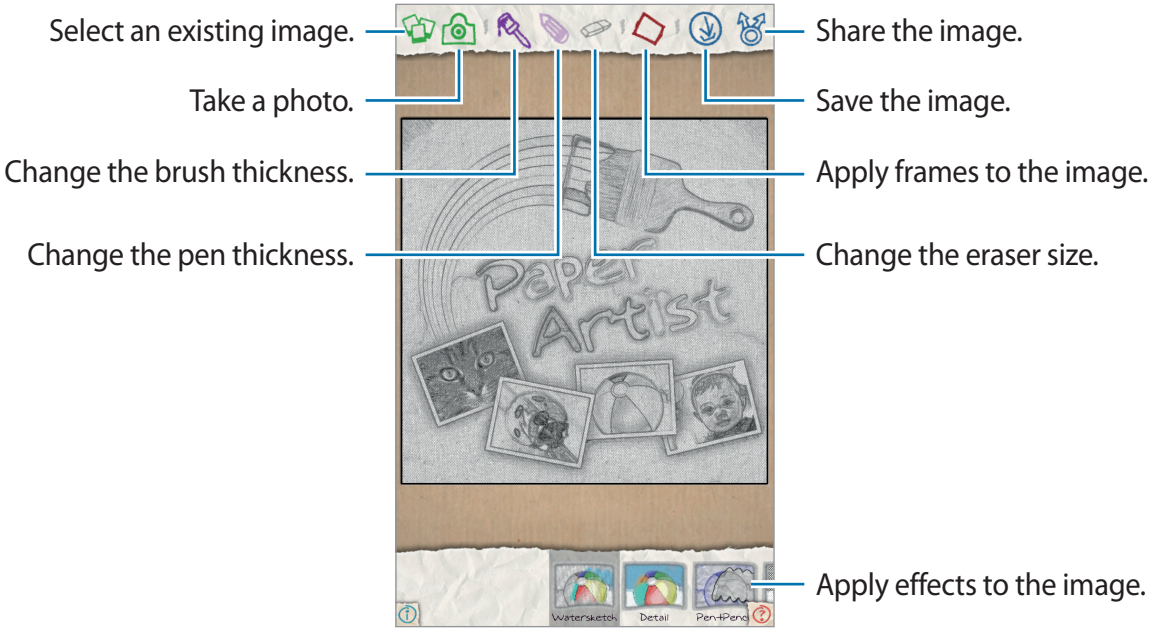
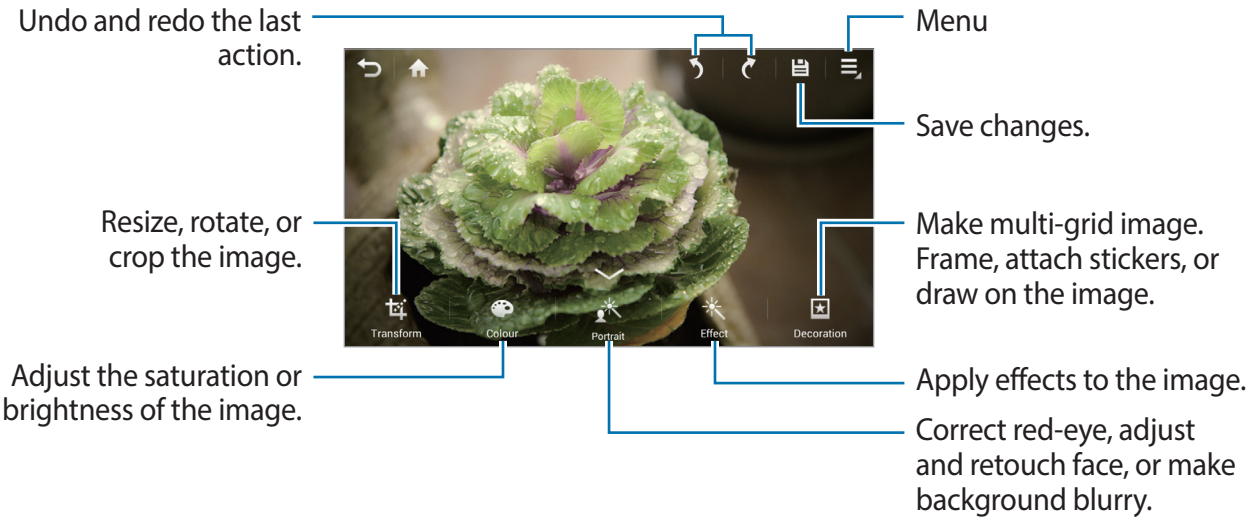


Photo Wizard

Use this application to embellish images by applying various effects, such as the pop art effect.

Tap **Photo Wizard** on the Applications screen.


Undo and redo the last action.
Menu
Save changes.
Resize, rotate, or crop the image.
Make multi-grid image. Frame, attach stickers, or draw on the image.
Adjust the saturation or brightness of the image.
Apply effects to the image.
Correct red-eye, adjust and retouch face, or make background blurry.
Transform
Colour
Portrait
Effect
Decoration

Tap to finish.

Resizing images

Tap **Transform** → **Resize**.

Select a percentage at the bottom of the screen, or drag the frame to resize, and then tap **Done**.

Rotating images

Tap **Transform** → **Rotate**.

Select an option at the bottom of the screen, or drag the screen to rotate, and then tap **Done**.

Cropping photos

Tap **Transform** → **Crop**, and then select one of the following options:

- **Square**: Rotate or resize the frame by dragging the frame, or tap **Square** and select an option, and then tap **Done**.
- **Lasso**: Draw an area, and then tap **Done**.

Changing colors

Tap **Color**, select one of the color effects that appear at the bottom of the screen, drag the slider to left or right if required, and then tap **Done**.

Adjusting a portrait photo

Tap **Portrait**, select one of the portrait effects that appear at the bottom of the screen, drag the slider to left or right if required, and then tap **Done**.

Applying filter effects

Tap **Effect**, select one from among the filter effects that appear at the bottom of the screen, drag the slider to left or right if required, and then tap **Done**.

Decorating images

Use this to decorate images with frames, stickers, drawings, or attach several images into a single image.

Framing images

Tap **Decoration** → **Frames**, select one of the frames that appear at the bottom of the screen, and then tap **Done**.

Putting stickers on images

Tap **Decoration** → **Sticker**, select one of the stickers that appear at the bottom of the screen, and then tap **Done**.

Making multi-grid images

Tap **Decoration** → **Multi-grid**, select one of the grid layouts that appear at the bottom of the screen, add images, and then tap **Done**.

Drawing on images

Tap **Decoration** → **Drawing**, draw on the image, and then tap **Done**.

Video Player

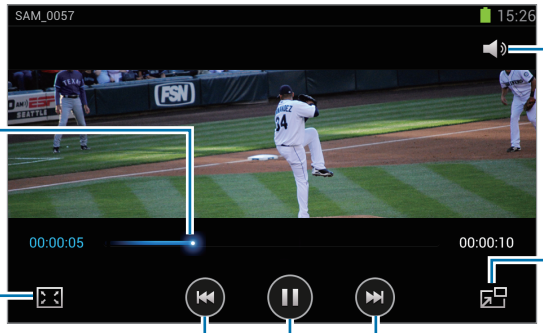
Use this application to play video files.

Tap **Video Player** on the Applications screen.

- Some file formats are not supported depending on the device's software.
- Some files may not play properly depending on how they are encoded.

Playing videos

Select a video to play.


SAM_0057
15:26
00:00:05
00:00:10
Adjust the volume.
Move forwards or backwards by dragging the bar.
Switch to floating screen mode.
Change screen ratio.
Skip to the next video. Tap and hold to move forwards quickly.
Restart the current video or skip to the previous video. Tap and hold to move backwards quickly.
Pause and resume playback.

Deleting videos

Tap **Delete**, select a video(s), and then tap **Delete**.

Sharing videos

Tap → **Share via**, select a sharing method, select a video(s), then tap **Done**.

Video Editor

Use this application to edit videos and apply various effects.

Tap **Video Editor** on the Applications screen.

- Some video files in **Gallery** may not be viewable depending on video resolution and codec.
- Some files may not play properly depending on how they are encoded.

Creating videos

Select a frame theme, and then tap the frame again to confirm. To add media files, tap **Add media**, and then tap the icon corresponding to the desired media type at the left pane of the screen. Tap and hold a file and drag it to the top pane of the screen. Repeat file insertion as needed, and then tap **Done** to finish.

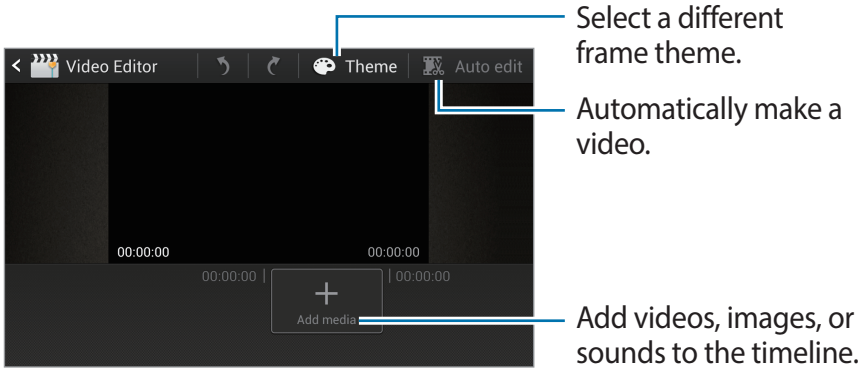
To delete a frame, tap and hold a frame, and then drag it to the rubbish bin.

To rearrange frames, tap and hold a frame, and then drag it to a new location.

Tap and add a transition effect between frames.

To save, tap → **Save**.

To export the video as a file, tap → **Export**.



Trimming segments of a video

Select a frame, move the start bracket to the desired starting point, move the end bracket to the desired ending point, and then save.

Splitting videos

Select and drag the frame to the orange line, tap ✂, and save.

Applying effects to a video

Select a frame, tap **Effects**, select an effect option, and then save the video.

Editing a video automatically

Automatically make a video.

With media materials, such as videos, images, or audio tracks, inserted in the bottom pane, tap **Auto edit** → **OK**, and then specify the total playtime of the video.

To use **Auto edit**, total playtime of the media materials must be at least 30 seconds.

Music Player

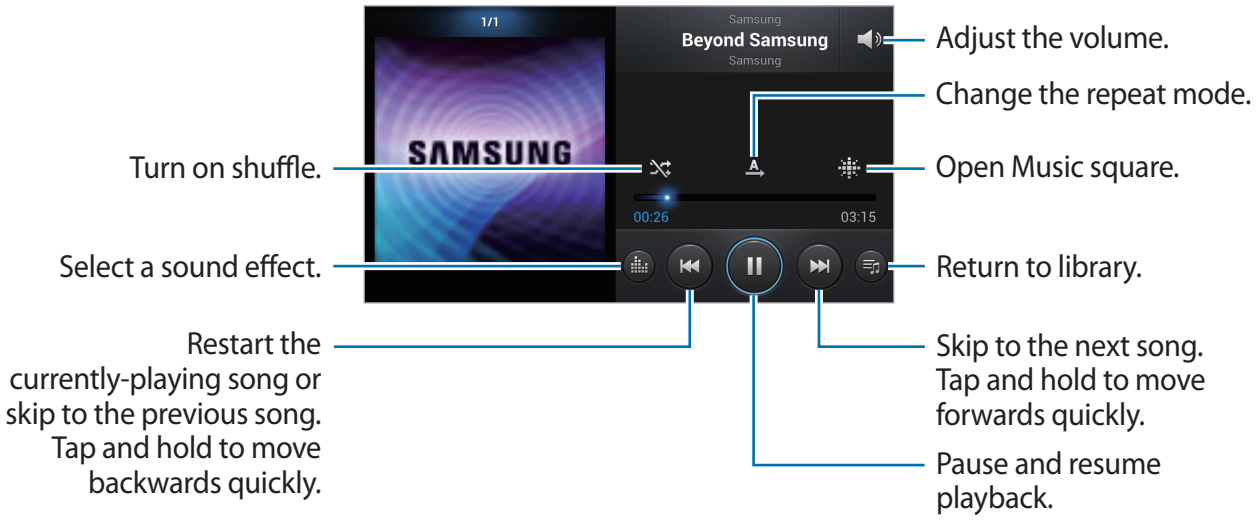
Use this application to listen to music.

Tap **Music Player** on the Applications screen.

- Some file formats are not supported depending on the device's software version.
- Some files may not play properly depending on the encoding used.

Playing music

Select a music category, and then select a song to play.



Creating playlists

Tap **Playlists** among the dropdowns, and then tap → **Create playlist**. Enter a title and tap **OK**. Tap **Add music**, select songs to include, and then tap **Done**.

To add the currently-playing song to a playlist, tap → **Add to playlist**.

Playing music by mood

Play music grouped by mood. The playlist is automatically created by the device. When a new song is added, tap **Music square** from the dropdowns, and then → **Library update**.

Tap **Music square** and select a cell of mood.

YouTube

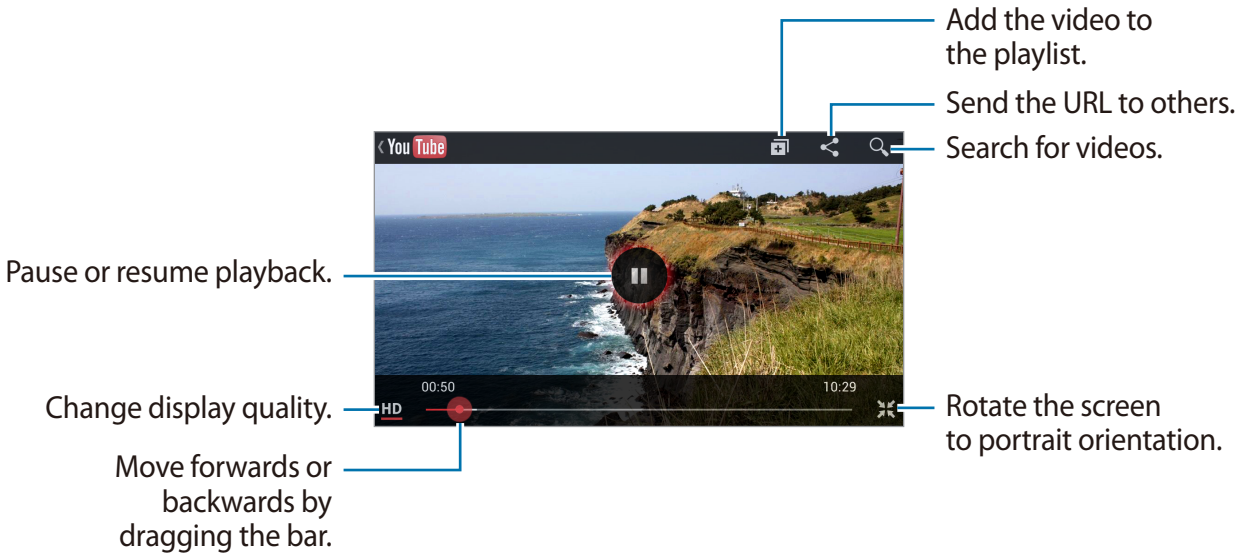
Use this application to watch videos from the YouTube website.

Tap **YouTube** on the Applications screen.

This application may not be available depending on the region or service provider.

Watching videos

Tap , and then enter a keyword. Select one of the returned search results to watch a video.



Sharing videos

Select the video to view, tap , and then select a sharing method.

Uploading videos

Select your Google account if it is linked to YouTube. Tap → a video, enter information for the video, and then tap **Upload**.

Instagram

Use this application to view and share photos.

Tap **Instagram** on the Application screen.

This application may not be available depending on the region or service provider.

Tap **Register** to sign up, or tap **Sign in**, and then follow on-screen instructions to complete the account setup.

Communication

Contacts

Use this application to manage contacts, including phone numbers, email addresses, and others.

Tap **Contacts** on the Applications screen.

Managing contacts

Creating a contact

Tap + and enter contact information.

- : Add an image.
- / : Add or delete a contact field.

Editing a contact

Tap .

Deleting a contact

Tap → **Delete**.

Searching for contacts

Use one of the following search methods:

- Scroll up or down the contacts list.
- Use the index at the right side of the contacts list for quick scrolling, by dragging a finger along it.
- Tap the search field at the top of the contacts list and enter search criteria.

Once a contact is selected, take one of the following actions.

- : Add to favorite contacts.
- : Compose a message.
- : Compose an email.

Importing and exporting contacts

Syncing with Samsung account

Tap → **Merge with Samsung**.

If a contact is added or deleted on the device, it is also added to or deleted from Samsung account, and vice versa.

Syncing with Google Contacts

Tap → **Merge with Google**.

Contacts synced with Google Contacts appear with in the contacts list.

If a contact is added or deleted on the device, it is also added to or deleted from Google Contacts, and vice versa.

Importing contacts

Tap → **Import/Export** → **Import from SIM card** or **Import from SD card**.

Exporting contacts

Tap → **Import/Export** → **Export to SIM card** or **Export to SD card**.

Sharing contacts

Tap → **Import/Export** → **Share namecard via**, select contacts, tap **Done**, and then select a sharing method.

Favorite contacts

Tap , and then take one of the following actions:

- **Search**: Search a contact.
- **Add to favorites**: Add contacts to favorites.
- **Remove from favorites**: Remove contacts from favorites.
- **Grid view** / **List view**: View contacts in grid or list form.

Contact groups

Adding contacts to a group

Select a group, and then tap . Select contacts to add, and then tap **Done**.

Managing groups

Tap , and then take one of the following actions:

- **Create**: Make a new group.
- **Search**: Search for contacts.
- **Change order**: Tap and hold next to the group name, drag it up or down to another position, and then tap **Done**.
- **Delete groups**: Select user-added groups, and then tap **Delete**. Default groups cannot be deleted.

Sending a email to a group's members

Select a group, tap → **Send email**, select members, and then tap **Done**.

Business card

Create a business card and send it to others.

Tap **Set up my profile**, enter details, such as phone number, email address, and postal address, and then tap **Save**. If user information is saved when setting up the device, select the business card in **ME**, and then tap to edit.

Tap → **Share namecard via**, and then select a sharing method.

Email

Use this application to send or view email messages.

Tap **Email** on the Applications screen.

Setting up email accounts

Set up an email account when opening **Email** for the first time.

Enter the email address and password. Tap **Next** for a private email account, such as Google Mail, or tap **Manual setup** for a company email account. After that, follow on-screen instructions to complete the setup.

To set up another email account, tap → **Settings** → **Add account**.

Sending email messages

Tap the email account to use, and then tap **Compose** at the top of the screen. Enter recipients, subject, and message, and then tap **Send**.

Tap to add a recipient from the contacts list.

Tap → **Add Cc/Bcc** to add more recipients.

Tap **Attach** to attach images, videos, contacts, events, and others.

Tap to insert images, events, contacts, and information location into the message.

Sending scheduled messages

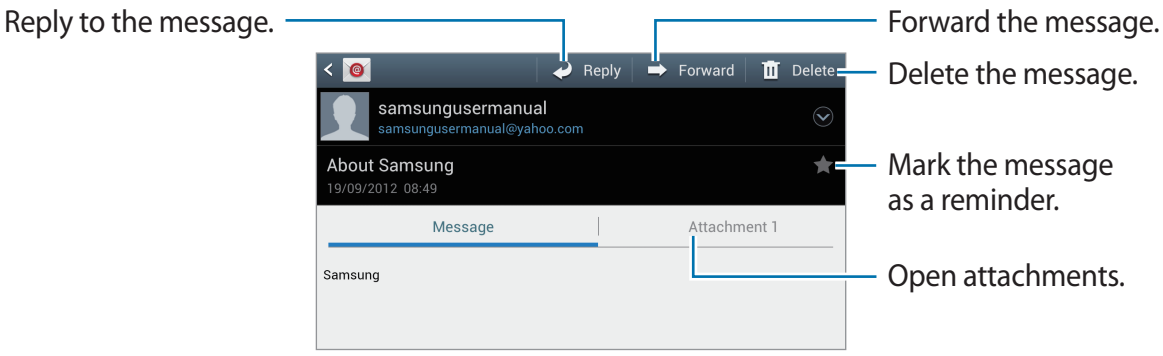
Tap → **Schedule sending**. Tick **Schedule sending**, set a time and date, and then tap **Done**. The device will send the message at the specified time and date.

- If the device is turned off at the scheduled time, is not connected to the network, or the network is unstable, the message will not be sent.
- This feature is based on the time and date set on the device. The time and date may be incorrect if you move across timezones and the network does not update the information.

Reading messages

Select an email account to use, and new messages are retrieved. To manually retrieve new messages, tap **Refresh**.

Tap a message to read.



Tap the attachment tab to open attachments, and then tap next to an attachment to save it.

Google Mail

Use this application to quickly and directly access the Google Mail service.

Tap **Google Mail** on the Applications screen.

- This application may not be available depending on the region or service provider.
- This application may be labelled differently depending on the region or service provider.

Sending messages

In any mailbox, tap , enter recipients, a subject, and a message, and then tap **SEND**.

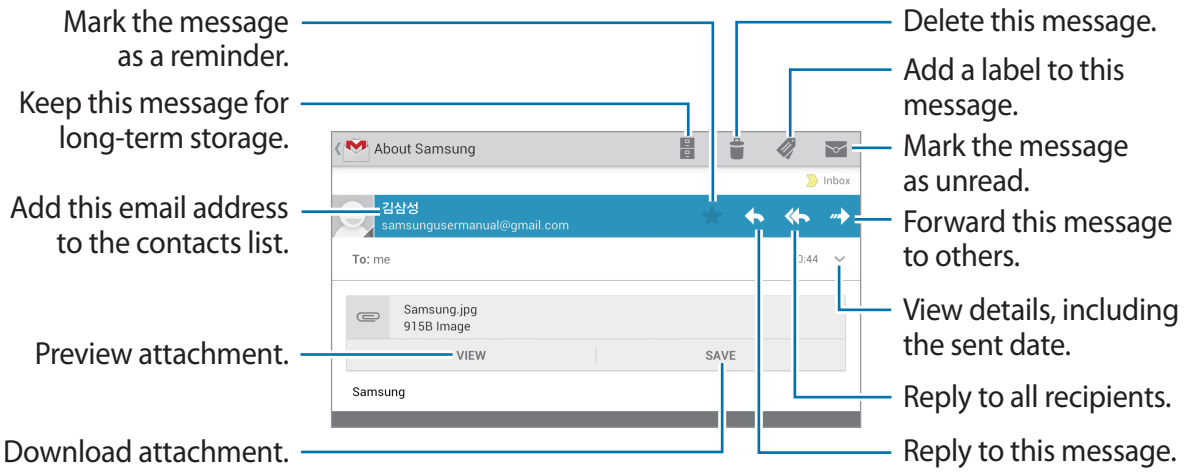
Tap → **Attach file** to attach images.

Tap → **Add Cc/Bcc** to add more recipients.

Tap → **Save draft** to save the message for later delivery.

Tap → **Discard** to start over.

Reading messages



Labels

Google Mail does not use actual folders, but uses labels instead. When Google Mail is launched, it displays messages labelled Inbox.

Tap to manually retrieve new messages.

Tap to view messages in other labels.

To add a label to a message, select the message, tap , and then select the label to assign.

Talk

Use this application to chat with others via Google Talk.

Tap **Talk** on the Applications screen.

This application may not be available depending on the region or service provider.

Public profile

Tap the account ID at the top of the friends list to change the availability status, image, or status message.

Adding friends

Tap , enter the email address of the friend to add, and then tap **Done**.

Chatting with friends

Select a friend from the friends list, enter a message in the field at the bottom of the screen, and then tap .

To add a friend to chat, tap → **Add to chat**.

To end the chat, tap → **End chat**.

Switching between chats

To switch between chats, flick left or right.

Deleting chat history

Chats are automatically saved. To delete chat history, tap → **Clear chat history**.

ChatON

Use this application to chat with any device that has a mobile phone number.

Tap **ChatON** on the Applications list.

The first time you use **ChatOn** , the registration process will require a phone number for sending a voice or SMS verification code. Please use an alternative device to receive this notification and enter the verification code sent to register on ChatOn.

Create the buddies list by entering phone numbers or email addresses of Samsung accounts, or selecting buddies from the list of suggestions.

Select a buddy to start chatting.

To sync contacts on the device with ChatON, tap **Settings** → **Sync contacts**.

Google+

Use this application to create groups to send and receive instant messages and upload your photos.

Tap **Google+** on the Applications list.

This application may not be available depending on the region or service provider.

Tap **All circles** to change the category, and then scroll right or left to view posts from your circles. To create a post, tap .

- **Home**: View posts grouped by featured, your circle, or nearby.
- **Profile**: View your activities in Google+.
- **My photos**: View images you have uploaded.
- **Events**: View upcoming events.
- **Messenger**: Chat with others.
- **Circles**: Manage your circles.
- **Local**: Search for nearby restaurants, banks, bus stops, and more.
- **NOTIFICATIONS**: Display notifications.

Messenger

Use this application to chat with others via Google+ instant messaging service.

Tap **Messenger** on the Applications list.

This application may not be available depending on the region or service provider.

Select a friend from the friends list, enter a message in the field at the bottom of the screen, and then tap ➤.

Web & network

Google® Chrome

Use this application to browse the Internet.

Tap **Google Chrome** on the Applications screen.

Viewing webpages

Tap the address field, enter the web address, and then tap **Go**.

Opening a new page

Tap → **New tab**.

To go to another webpage, tap , and tap the page from the thumbnails.

Searching the web by voice

Tap the address field, tap , speak a keyword, and then select one of the suggested keywords that appear.

Bookmarks

To bookmark the current webpage, tap → ☆, enter details, such as name and web address, and then tap **Save**.

To open a bookmarked webpage, tap → **Bookmarks**, and then select one.

Sharing webpages

To share a webpage address with others, tap → **Share...**

To share a part of a webpage, tap and hold the desired text, tap **SHARE**.

Syncing with other devices

Sync open tabs and bookmarks to use with Chrome on another device, when you are logged in with the same Google account.

To view open tabs on other devices, tap → **Other devices**. Select a webpage to open.

To view bookmarks, tap ★.

Bluetooth

Bluetooth creates a direct wireless connection between two devices over short distances. Use Bluetooth to exchange data or media files with other devices.

- Samsung is not responsible for the loss, interception, or misuse of data sent or received via the Bluetooth feature.
- Always ensure that you share and receive data with devices that are trusted and properly secured. If there are obstacles between the devices, the operating distance may be reduced.
- Some devices, especially those that are not tested or approved by the Bluetooth SIG, may be incompatible with your device.
- Do not use the Bluetooth feature for illegal purposes (for example, pirating copies of files or illegally tapping communications for commercial purposes).

Samsung is not responsible for the repercussion of illegal use of the Bluetooth feature.

To activate Bluetooth, on the Applications screen, tap **Settings** → **Bluetooth**, and then drag the **Bluetooth** switch to the right.

Pairing with other Bluetooth devices

On the Applications screen, tap **Settings** → **Bluetooth** → **Scan**, and detected devices are listed. Select the device you want to pair with, and then accept the auto-generated passkey on both devices to confirm.

Sending and receiving data

Many applications support data transfer via Bluetooth. An example is **Gallery**. Open **Gallery**, select an image, tap → **Bluetooth**, and then select one of the paired Bluetooth devices. After that, accept the Bluetooth authorisation request on the other device to receive the image. The transferred file is saved in the **Bluetooth** folder.

AllShare Play

Use this application to play contents saved on various devices over the Internet. You can play and send any file on any device to another device or web storage server.

To use this application, you must sign in to your Google and Samsung accounts, and register two or more devices as file servers. The registration methods may vary depending on the device type. To get more details, tap → **FAQ**.

Tap **AllShare Play** on the Applications screen.

This application may not be available depending on the region or service provider.

Sending files

Select a device or web storage and a file, and then tap .

Sharing files

Select a device or web storage and a file, tap , and then use the following options:

- **Group Cast**: Share screens with multiple other devices that are connected to the same Wi-Fi network.
- **Send to Nearby Users**: Share files with nearby devices that have AllShare Play activated.
- **Facebook**/**Twitter**/**Flickr**/**Picasa**: Upload to a social network site.

Playing files on a remote device

Select a device or web storage and a file, and then tap .

Managing contents on a web storage server

Select a web storage server, and then view and manage files.

Group Cast

Use this application to share images, documents, and music with other devices that are connected to the same Wi-Fi network.

Tap **Group Cast** on the Applications screen.

This application may not be available depending on the region or service provider.

Sharing files

1 Tap **Share picture**, **Share document**, or **Share music**, select the files to share, and then tap ✓.

2 Enter a PIN code and tap **Done**.

Joining another Group Cast

Tap another device under **Join**, enter the PIN code, and then tap **OK**.

Application & media stores

Play Store

Use this application to purchase and download applications and games that are able to run on the device.

Tap **Play Store** on the Applications screen.

This application may not be available depending on the region or service provider.

Installing applications

Browse applications by category, or tap to search with a keyword.

Select an application to view information. To download it, tap **Install**. If there is a charge for the application, tap the price, and follow on-screen instructions to complete the purchase process.

- When a new version is available for any installed application, an update icon appears at the top of the screen to alert you to the update. Open the notifications panel and tap the icon to update the application.
- To install applications that you downloaded from other sources, on the Applications screen, tap **Settings** → **Security** → **Unknown sources**.

Uninstalling applications

Uninstall the applications purchased from **Play Store**.

Tap → **My Apps**, select an application to delete in the list of installed applications, and then tap **Uninstall**.

Samsung Apps

Use this application to purchase and download dedicated Samsung applications. For more information, visit *www.samsungapps.com*.

Tap **Samsung Apps** on the Applications screen.

This application may not be available depending on the region or service provider.

If a Samsung account is not registered, follow on-screen instructions to create a Samsung account. To complete the subscription process, read the terms and conditions, and then tap **Accept** to agree to them.

Installing applications

Browse applications by category. Tap to select a category.

To search for an application, tap at the top of the screen, and then enter a keyword in the search field.

Select an application to view information. To download it, tap **Get**.

When a new version is available for any installed application, an update icon appears at the top of the screen to alert you to the update. Open the notifications panel and tap the icon to update the application.

S Suggest

Use this application to find and download the latest applications suggested by Samsung.

Tap **S Suggest** on the Applications screen.

This application may not be available depending on the region or service provider.

Game Hub

Use this application to access games.

Tap **Game Hub** on the Applications screen.

The games available may vary depending on the region or service provider.

Select a game service, and then search for and access games.

Play Books

Use this application to browse and download book files. You can read book files on your device.

Tap **Play Books** on the Applications screen.

This application may not be available depending on the region or service provider.

Play Movies & TV

Use this application to browse and rent movies.

Tap Play Movies & TVon the Applications screen.

The games available may vary depending on the region or service provider.

Utilities

Calendar

Use this application to manage events and tasks.

Tap **Caledar** on the Applications screen.

Creating events or tasks

Tap , and then use one of the following methods:

- **Quick add**: Create an event or task with a few keywords. This feature is available only for English and Korean.
- **Add event**: Enter an event with an optional repeat setting.
- **Add task**: Enter a task with an optional priority setting.

To add an event or task more briefly, tap a date to select it and tap it again.

Enter a title and specify which calendar to use or sync with. Then tap **Edit event details** or **Edit task details** to add more details, such as how often the event repeats, when it has an advance alert, or where it takes place.

Attach a map showing the location of the event. Enter the location in the **Location** field, tap next to the field, and then pinpoint the precise location by tapping and holding on the map that appears.

Attach an image. Tap **Images**, and then take a photo or select one of the existing images.

Syncing with Google Calendar

To manually sync for updating, tap → **Sync**.

Changing calendar type

Select one from among different types of calendars including year, month, week, and others. A pinch gesture can be used to change calendar type. For example, pinch to change from the monthly calendar to the yearly calendar, and spread apart to change yearly calendar back to monthly calendar.

Searching for events

Tap → **Search**, and then enter a keyword to search for.

To view today's events, tap **Today** at the top of the screen.

Deleting events

Select a date or event, and then tap → **Delete**.

Sharing events

Select an event, tap → **Share via**, and then select a sharing method.

Dropbox

Use this application to save and share files with others via the Dropbox cloud storage. When you save files to your Dropbox folder, your device automatically sync with the web server and any other computers that have Dropbox installed.

This application may not be available depending on the region or service provider.

To activate Dropbox, on the Applications screen, tap **Dropbox**. Follow on-screen instructions to complete the setup.

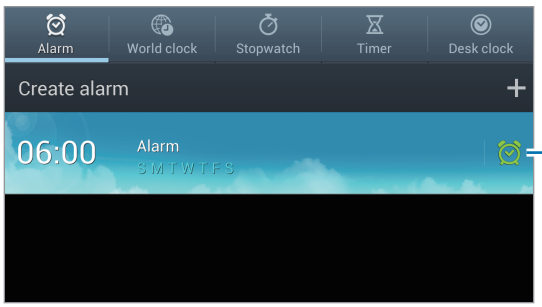
To upload files to your Dropbox folder, tap → **Photos or videos** or **Other files**.

To view a file, tap , and then select a file.

Clock

Use this application to set alarms, check the time in any location in the world, measure the duration of an event, set a timer, or use as the desk clock.

Tap **Clock** on the Applications screen.



Alarm

Setting alarms

Tap **Create alarm**, set a time for the alarm to go off, select days for the alarm to repeat, and then tap **Save**.

- **Snooze**: Set an interval and the number of times for the alarm to repeat after the preset time.
- **Smart alarm**: Set a time for the alarm to go off before the preset time.

Stopping alarms

Drag outside the large circle to stop an alarm. Drag outside the large circle to repeat the alarm after a specified length of time.

Deleting alarms

Tap → **Delete**, select alarms, and then tap **Delete**.

World clock

Creating clocks

Tap **Add city**, and then enter a city name or select a city from the cities list.

To apply summer time, tap and hold a clock, and then tap **DST settings**.

Deleting clocks

Tap → **Delete**, select clocks, and then tap **Delete**.

Stopwatch

Tap **Start** to time an event. Tap **Lap** to record lap times.

Tap **Reset** to clear lap time records.

Timer

Set the duration, and then tap **Start**.

Drag outside the large circle when the timer goes off.

Desk clock

Tap to view in full screen.

Calculator

Use this application for simple or complex calculations.

Tap **Calculator** on the Applications screen.

To see calculation history, tap to hide the keypad.

To clear history, tap → **Clear history**.

To change the character size for history, tap → **Text size**.

S Voice

Use this application to command by voice the device to send a message and more.

Tap **S Voice** on the Applications screen.

This feature may be unavailable depending on the region or service provider.

Here are several examples of spoken commands:

- Open music
- Launch calculator
- Check schedule

Tips for better voice recognition

- Speak clearly.
- Speak in quiet places.
- Do not use offensive or slang words.
- Avoid speaking in dialectal accents.

The device may not recognize your commands or may perform unwanted commands depending on your surroundings or how you speak.

Google

Use this application to search not only the Internet, but also applications and their contents on the device as well.

Tap **Google** on the Applications screen.

Searching the device

Tap the search field, and then enter a keyword. Alternatively, tap , speak a keyword, and then select one of the suggested keywords that appear.

If no results are returned from the applications, the web browser appears, displaying the search results.

Search scope

To select what applications to search, tap → **Settings** → **Phone search**, and then tick the items to search for.

Google Now

Launch Google search to view Google Now cards that show the current weather, public transit info, your next appointment, and more when you are most likely to need it.

Join Google Now when opening Google search for the first time. To change Google Now settings, tap → **Settings** → **Google Now**.

Voice Search

Use this application to search webpages by speaking.

Tap **Voice Search** on the Applications screen.

This application may not be available depending on the region or service provider.

Speak a keyword or phrase when **Speak now** appears on the screen. Select one of the suggested keywords that appear.

Task manager

Use this application to check system status.

Tap and hold on any screen, and then tap **Task manager**.

Active applications

Tap **Active applications** to check what applications are currently running.

To close an application, tap **End** next to it.

To close all running applications, tap **End all**.

Downloaded

Tap **Downloaded** to check what applications are installed.

To uninstall an application, tap **Uninstall** next to it.

RAM

Tap **RAM** to check how much memory is being used.

To close every application, including ones running on background, tap **Clear memory**.

Storage

Tap **Storage** to check how much of the flash memory and memory card is occupied.

Help

Tap **Help** to view tips about how to extend battery life.

My Files

Use this application to access all kinds of files stored in the device, including images, videos, songs, and sound clips.

Tap **My Files** on the Applications screen.

Select a folder to open it. To go back to the parent folder, tap **Up**. To return to the root directory, tap **Home**.

In a folder, tap , and then use one of the following options:

- **Create folder**: Create a folder.
- **Search**: Search for files or folders.
- **View by**: Change the view mode.
- **Sort by**: Sort files or folders.
- **Settings**: Change the file manager settings.
- **Select all**: Select all files in the folder.

Downloads

Use this application to see what files are downloaded through the applications.

Tap **Downloads** on the Applications screen.

This application may not be available depending on the region or service provider.

To see the files downloaded from the Internet, tap **Internet downloads**, otherwise, tap **Other downloads** to see the files downloaded from other applications, such as **Email**.

Select a file to open it with an appropriate application.

Travel & local

Maps

Use this application to pinpoint the location of the device, search for places, or get directions.

Tap **Maps** on the Applications screen.

This application may not be available depending on the region or service provider.

Viewing maps

Scroll in any direction to view a location or find your way.

To zoom in or out the map, spread two fingers apart on the screen to zoom in, and pinch to zoom out.

To overlay multiple layers including satellite images, traffic information, and more, tap .

Searching for locations

Tap , enter an address, and then tap . Select a location to view the detailed location information. To search for nearby locations, tap .

Once the location is found, tap and use one of the following functions:

- **Clear Map**: Clear the map.
- **Make available offline**: Save the map of a specified area to view it offline.
- **Settings**: Change the map settings.
- **Help**: View information about using the map.

To view current location, tap .

Get directions for a destination

1 Tap .

2 Tap , and then select a method to enter starting and ending locations:

- **My current location**: Use current location for starting location.
- **Contacts**: Select from the contacts list.
- **Point on map**: Pinpoint by tapping on the map.
- **My Places**: Select from the list of favorite places.

3 Select a travel method, such as driving, public transit, or walking, and then tap **GET DIRECTIONS**.

4 Select one of the routes that appear, and then tap **MAP VIEW** to view details.

Local

Use this application to search for nearby restaurants, banks, bus stops, and more.

Tap **Local** on the Applications screen.

This application may not be available depending on the region or service provider.

Select a place category, and then select a place from the list of search results.

- **Map**: Pinpoint the place on the map.
- **Directions**: Search for a route to the place.

To add a place category, tap → **Add a search** on the category list, and then enter a keyword to search into the text field, and then tap **Done**.

Latitude

Use this application to share location information with friends.

Tap **Latitude** on the Applications screen.

This application may not be available depending on the region or service provider.

To add a friend with whom location information is shared, tap → **Select from Contacts** or **Add via email address**. Select one from contacts or enter an email address, and then tap **Add friends** to send an invitation. Once the invitation is accepted, either party can know where the other party is located.

Navigation

Use this application to search for a route to a destination.

Tap **Navigation** on the Applications screen.

- Navigation maps, your current location, and other navigational data may differ from actual location information. You should always pay attention to road conditions, traffic, and any other factors that may affect your driving. Follow all safety warnings and regulations while driving.
- This application may not be available depending on the region or service provider.

Specify the destination by using one of the following methods:

- Speak the destination address.
- Enter the destination address.
- Set navigational directions to your home.
- Select the destination from the map.

Once a route is found, follow on-screen instructions to navigate to the destination.

Settings

About Settings

Use this application to configure the device, set application options, and add accounts.

Tap **Settings** on the Applications screen.

Wi-Fi

Activate the Wi-Fi feature to connect to a Wi-Fi network and access the Internet or other network devices.

To use options, tap .

- **Advanced**: Change usage settings for Wi-Fi feature.
- **WPS push button**: Connect to a secured Wi-Fi network with a WPS button.
- **WPS PIN entry**: Connect to a secured Wi-Fi network with a WPS PIN.

Setting Wi-Fi sleep policy

On the Settings screen, tap **Wi-Fi** → → **Advanced** → **Keep Wi-Fi on during sleep**.

When entering power-saving mode, the device automatically turns off Wi-Fi connections. When this happens, the device automatically accesses data networks if it is set to use them. This may incur data transfer fees. To avoid data-usage bills, set this option to **Always**.

Setting Network notification

The device can detect open Wi-Fi networks and display an icon on the status bar to notify when available.

On the Settings screen, tap **Wi-Fi** → → **Advanced** and tick **Network notification** to activate this feature.

Wi-Fi Direct

Wi-Fi Direct connects two devices directly via a Wi-Fi network without requiring an access point.

On the Settings screen, tap **Wi-Fi** → **Wi-Fi Direct**.

Bluetooth

Activate the Bluetooth feature to exchange information over short distances.

Data usage

Keep track of your data usage amount, and customize the settings for the limitation.

- **Mobile data**: Set to use data connections on any mobile network.
- **Set mobile data limit**: Set a limit for the mobile data usage.
- **Data usage cycle**: Change the settings for the limit cycle.

To use more options, tap .

- **Data roaming**: Set to use data connections when you are roaming.
- **Restrict background data**: Set to disable sync in the background while using a mobile network.
- **Auto sync data**: Set the device to sync contact, calendar, email, bookmark, and social network image data automatically.
- **Show Wi-Fi usage**: Set to show your data usage via Wi-Fi.
- **Mobile hotspots**: Search for and use another device's mobile network.

More settings

Customize settings to control connections with other devices or networks.

Airplane mode

This disables all wireless functions on your device. You can use only non-network services.

Smart network

This disables all data network functions on your device when the screen is turned off, and disconnects applications, such as SNS applications or **Email**. When the screen in turned on, all new notifications that were not received while the screen was off are retrieved.

You can save battery power by turning on this feature.

Mobile networks

- **Mobile data**: Use to allow packet switching data networks for network services.
- **Global Data Roaming Access**: Use the device to connect to another network when you are roaming or your home network is not available.
- **Access Point Names**: Set up access point names (APNs).

VPN

Set up and connect to virtual private networks (VPNs).

Nearby devices

- **File sharing**: Activate media sharing to allow other DLNA certified devices to access media files on your device.
- **Shared contents**: Set to share your contents with other devices.
- **Device name**: Enter a media server name for your device.
- **Allowed devices list**: View the list of devices that can access your device.
- **Not-allowed devices list**: View the list of devices that are blocked from accessing your device.
- **Download to**: Select a memory location for saving media files.
- **Upload from other devices**: Set to accept uploads from other device.

AllShare Cast

Activate the AllShare Cast feature and share your display with others.

- To save energy, deactivate the AllShare Cast feature when not in use.
- If you specify a Wi-Fi frequency band, AllShare Cast dongles may not be found or connected.
- If you play videos or games on a TV, select an appropriate TV mode to get the best experience from AllShare Cast.

Kies via Wi-Fi

Connect the device to Samsung Kies via a Wi-Fi network.

Sound

Change settings for various sounds on the device.

- **Volume**: Adjust the volume level for music and videos, system sounds, and notifications.
- **Default notifications**: Select a ringtone for events, such as incoming messages and alarms.
- **Touch sounds**: Set the device to sound when selecting an application or option on the touch screen.
- **Screen lock sound**: Set the device to sound when locking or unlocking the touch screen.

Display

Change the settings for the display.

- **Wallpaper**:
  - **Home screen**: Select a background image for the Home screen.
  - **Lock screen**: Select a background image for the locked screen.
  - **Home and lock screens**: Select a background image for the Home screen and the locked screen.
- **Screen mode**: Select a display mode.
- **Brightness**: Set the brightness of the display.

- **Auto-rotate screen**: Set the content to rotate automatically when the device is turned.
- **Screen timeout**: Set the length of time the device waits before turning off the display's backlight.
- **Font style**: Change the font type for display text.
- **Font size**: Change the font size.
- **Display battery percentage**: Set to display remaining battery power level.

Storage

View memory information for your device and memory card, or format the USB storage and a memory card.

Formatting a memory card permanently deletes all data from it.

The actual available capacity of the internal memory is less than the specified capacity because the operating system and default applications occupy part of the memory.

Power

Activate power-saving mode and change the settings for power-saving mode.

- **Auto power off**: Set the length of time the device waits before turning off.

  - The device automatically turns off if the screen is not touched, or the buttons are not pressed for a preset length of time. For extended use, select a longer time period.
  - This feature is disabled when playing videos or listening to music.
  - You can save battery power by turning on this feature.

- **Power saving mode**:
  - **CPU power saving**: Set the device to limit some system resource usage.
  - **Screen power saving**: Set the device to decrease the brightness of the display.
  - **Learn about power saving**: Discover how to reduce battery consumption.
- **Fast power-on**: Activating this causes the device to start quickly for the next 24 hours.

Battery

View the amount of battery power consumed by your device.

Application manager

View and manage the applications on your device.

Location services

- **Use wireless networks**: Set to use Wi-Fi and/or mobile networks for finding the current location.
- **Use GPS satellites**: Set to use the GPS satellite for finding the current location.
- **Location and Google Search**: Set to use your current location for Google search and other Google services.

Lock screen

Change settings for securing the device.

- **Screen lock**: Activate the screen lock feature.
- **Lock screen options**:

The settings are applied only when you set the swipe lock option.

  - **Clock**: Set to show the clock on the locked screen.
  - **Dual clock**: Set to show the dual clock on the locked screen.

  - **Weather**: Set to show weather information on the locked screen.
  - **Ripple effect**: Set to show the ripple effect on the locked screen.
  - **Help text**: Set to show the help text on the locked screen.
  - **Wake up in lock screen**: Set the device to recognize your wake up command when the screen is locked.
  - **Set wake-up command**: Set a wake up command to launch the **S Voice** application or perform a specified function.
- **Owner information**: Enter your information that is shown on the locked screen.

Security

Change settings for securing the device and the SIM card.

- **Encrypt device**: Set a password to encrypt data saved on the device. You must enter the password each time you turn on the device.

Charge the battery before enabling this setting because it may take more than an hour to encrypt your data.

- **Encrypt external SD card**:
  - **Encrypt**: Set to encrypt files when you save them to a memory card.
  - **Full encryption**: Set to encrypt all files on a memory card.
  - **Exclude multimedia files**: Set to encrypt all files on a memory card, except for media files.

If you reset your device to the factory defaults with this setting enabled, the device will not be able to read your encrypted files. Disable this setting before resetting the device.

- **Set up SIM card lock**:
  - **Lock SIM card**: Activate or deactivate the PIN lock feature to require the PIN before using the device.
  - **Change SIM PIN**: Change the PIN used to access SIM data.
- **Make passwords visible**: By default, the device hides passwords for security. Set the device to display passwords as they are entered.
- **Device administrators**: View device administrators installed on the device. You can allow device administrators to apply new policies to the device.
- **Unknown sources**: Choose to install applications from any source. If not chosen, download applications only from **Play Store**.
- **Trusted credentials**: Use certificates and credentials to ensure secure use of various applications.
- **Install from device storage**: Install encrypted certificates stored on the USB storage.
- **Clear credentials**: Erase the credential contents from the device and reset the password.

Language and input

Change the settings for text input.

Language

Select a display language for all menus and applications.

Default

Select a default keyboard type for text input.

Google voice typing

To change the voice input settings, select ⚙.

- **Choose input languages**: Select input languages for Google voice recognition.
- **Block offensive words**: Set to prevent the device from recognizing offensive words in voice inputs.
- **Download offline speech recognition**: Download and install language data for offline voice input.

Samsung keyboard

To change the Samsung keyboard settings, select ⚙.

- **Portrait keyboard types**: Select the default input method, such as the QWERTY keyboard or traditional keyboard.
- **Input language**: Select languages for text input.
- **Predictive text**: Set the device to predict words according to input and display word suggestions.
- **Continuous input**: Set to enter text by sweeping on the keyboard.
- **Keyboard swipe**: Enable or disable the keyboard sweeping feature for the text input mode. Switch between input modes by scrolling left or right on the keyboard.
- **Handwriting**: Customize settings for handwriting mode, such as recognition time, pen thickness, or pen color.
- **Voice input**: Activate the voice input feature to enter text by voice on the Samsung keyboard.
- **Auto capitalisation**: Set the device to automatically capitalise the first character after a final punctuation mark, such as a full stop, question mark, or exclamation mark.
- **Auto-punctuate**: Set the device to insert a full stop when you double-tap the space bar.
- **Character preview**: Set the device to display a large image of each character tapped.
- **Key-tap sound**: Set the device to sound when tapping the buttons on the keypad.
- **Tutorial**: Learn how to enter text with the Samsung keyboard.
- **Reset settings**: Reset Samsung keyboard settings.

Voice search

For Google voice recognition, use the following options:

- **Language**: Select a language for the voice recognition.
- **Speech output**: Set the device to provide voice feedback to alert you to the current action.
- **Block offensive words**: Set to prevent the device from recognizing offensive words in voice inputs.
- **Download offline speech recognition**: Download and install language data for offline voice input.

For Samsung voice recognition, use the following options:

- **Language**: Select a language for the voice recognition.
- **Use location data**: Set to use location information for voice search results.
- **Hide offensive words**: Hide offensive words from voice search results.
- **Help**: Access help information for **S Voice**.
- **About**: View version information.
- **Control apps**: Set the device to recognize voice commands for controlling your device. You can select the features to control with voice commands.
- **Show body of message**: Set to view the text of a new message received while in driving mode.
- **Wake up command**: Set to start voice recognition by saying a wake up command while using **S Voice**.
- **Wake up in lock screen**: Set the device to recognize your wake up command when the screen is locked.
- **Set wake-up command**: Add or edit wake-up commands to start voice recognition.
- **Check missed events**: Set to check missed messages or events when **S Voice** is launched by pressing the headset button.
- **Home address**: Enter your home address to use location information with **S Voice**.
- **Log in to Facebook**: Enter your Facebook account information.
- **Log in to Twitter**: Enter your Twitter account information.

Text-to-speech output

- **Preferred TTS engine**: Select a speech synthesis engine. To change the settings for speech synthesis engines, tap ⚙.
- **Speech rate**: Select a speed for the text-to-speech feature.
- **Listen to an example**: Listen to the spoken text for an example.
- **Driving mode**: Activate driving mode to set the device to read contents aloud and specify applications to use in driving mode.

Pointer speed

Adjust the pointer speed for the mouse or trackpad connected to your device.

Cloud

Change settings for syncing data or managing your Samsung cloud and Dropbox cloud accounts.

Backup and reset

Change the settings for managing settings and data.

- **Back up my data**: Set to back up settings and application data to the Google server.
- **Backup account**: Set up or edit your Google backup account.
- **Automatic restore**: Set to restore settings and application data when the applications are reinstalled on the device.
- **Factory data reset**: Reset settings to the factory default values and delete all data.

Add account

Add your email or SNS accounts.

Motion

Change the settings that control motion recognition on your device.

- **Pan to move icon**: Set to move an item to another page when tapping and holding the item and then panning the device to the left or right.
- **Pan to browse images**: Set to scroll through an image by sliding the device in any direction when the image is zoomed in.
- **Sensitivity settings**: Set the sensitivity for each motion recognition.
- **Learn about motions**: Discover how to use each motion recognition.
- **Palm swipe to capture**: Set to capture an image of the screen when you sweep your hand to the left or right across the screen.
- **Palm touch to mute/pause**: Set to mute alarms and music by touching the screen with your palm.
- **Learn about hand motions**: View the tutorial for controlling hand motions.

Accessory

Change the accessory settings.

- **Audio output**: Select a sound output format to use when connecting your device to HDMI devices. Some devices may not support the surround sound setting.
- **Audio applications**: Set the device to show which applications are available when you connect a headset to the device.

Some devices may not support the surround sound setting.

Date and time

Access and alter the following settings to control how the device displays the time and date.

If the battery remains fully discharged or removed from the device, the time and date is reset.

- **Automatic date and time**: Automatically update the time and date when moving across time zones.
- **Set date**: Set the current date manually.
- **Set time**: Set the current time manually.
- **Automatic time zone**: Set to receive time zone information from the network when you move across time zones.
- **Select time zone**: Set the home time zone.
- **Use 24-hour format**: Display time in 24-hour format.
- **Select date format**: Select a date format.

Accessibility

Accessibility services are special features for those with certain physical disabilities. Access and alter the following settings to improve accessibility to the device.

- **Auto-rotate screen**: Set the interface to rotate automatically when you rotate the device.
- **Screen timeout**: Set the length of time the device waits before turning off the display's backlight.
- **Speak passwords**: Set the device to read aloud passwords you enter with Talkback.
- **Accessibility shortcut**: Add a shortcut to **Accessibility** on the quick menu that appears when you press and hold the Power button.
- **TalkBack**: Activate Talkback, which provides voice feedback.
- **Font size**: Change the font size.
- **Negative colors**: Reverse the display colors to improve visibility.
- **Text-to-speech output**:
  - **Preferred TTS engine**: Select a speech synthesis engine. To change the settings for speech synthesis engines, tap ⚙.
  - **Speech rate**: Select a speed for the text-to-speech feature.
  - **Listen to an example**: Listen to the spoken text for an example.
  - **Driving mode**: Activate driving mode to set the device to read contents aloud and specify applications to use in driving mode.
- **Enhance web accessibility**: Set applications to install web scripts to make their web content more accessible.
- **Mono audio**: Enable mono sound when listening to audio with one earbud.
- **Turn off all sounds**: Mute all device sounds.
- **Tap and hold delay**: Set the recognition time for tapping and holding the screen.

Developer options

Change the settings for application development.

- **Desktop backup password**: Set a password to secure your backup data.
- **Stay awake**: Set the screen to remain on while you are charging the battery.
- **Protect SD card**: Set to request a confirmation when reading data from a memory card.
- **USB debugging**: Activate USB debugging mode to connect your device to a computer with a USB cable.
- **Allow mock locations**: Allow mock locations and service information to be sent to a Location Manager service for testing.
- **Select debug app**: Select applications to debug and prevent errors when you pause debugging.
- **Wait for debugger**: Set to prevent the selected application from loading until the debugger is ready.
- **Show touches**: Set to show the pointer when you touch the screen.
- **Show pointer location**: Set to show the coordinates and traces of the pointer when you touch the screen.
- **Show layout boundaries**: Set to show boundaries.
- **Show GPU view updates**: Set to flash areas of the screen when they are updated with the GPU.
- **Show screen updates**: Set to flash areas of the screen when they are updated.
- **Window animation scale**: Select a speed for opening and closing pop-up windows.
- **Transition animation scale**: Select a speed for switching between screens.

- **Animator duration scale**: Select how long pop-up windows will be shown.
- **Disable hardware overlays**: Set to hide hardware overlays.
- **Force GPU rendering**: Set to use 2D hardware acceleration to improve graphic performance.
- **Strict mode**: Set the device to flash the screen when applications perform long operations.
- **Show CPU usage**: Set to list all active processes.
- **Profile GPU rendering**: Set to check the time of GPU rendering time.
- **Enable traces**: Set to capture traces of application and system performance.
- **Do not keep activities**: Set to end a running application when you launch a new application.
- **Limit background processes**: Set to limit the number of processes that can run in the background.
- **Show all ANRs**: Set the device to alert you to unresponsive applications that are running in the background.

About device

Access device information and update device software.

Troubleshooting

The subject's eyes appear red

Red eyes occurs when the subject's eyes reflect light from the camera flash.

If the photo has already been took, tap **Red eye removal** in the **Photo Wizard**.

Photos have dust spots

If dust particles are present in the air, you may capture them in photos when you use the flash.

- Turn off the flash or avoid capturing photos in a dusty place.
- Set ISO sensitivity options. (p. 40)

Photos are blurred

Blurring can occur if you capture photos in low light conditions or hold the device incorrectly.

- Half-press the Shutter button to ensure the subject is focused.
- Set the image stabilizer option.

Photos are blurred when shooting at night

As the device tries to let in more light, the shutter speed slows. This can make it difficult to hold the device steady long enough to take a clear picture and may result in device shake.

- Set **Night** in smart mode.
- Turn on the flash.
- Set ISO sensitivity options.
- Use a tripod to prevent your device from shaking.

Subjects come out too dark because of backlighting

When the light source is behind the subject or when there is a high contrast between light and dark areas, the subject may appear too dark.

- Avoid shooting toward the sun.
- Set the flash option to **Fill in**.
- Adjust the exposure.
- Set the metering option to **Spot** if a subject is in the center of the frame.

When you cannot turn on the device

- Ensure that the battery is inserted. (p. 9)
- Charge the battery.

When you cannot take photos or videos

- Your storage may be full. Delete unnecessary files, or insert a new memory card.
- Format the memory card.
- The memory card may be defective. Purchase a new card.
- Ensure that the device is turned on.
- Charge the battery.
- Ensure that the battery is inserted.

When the flash is not functional

- Press the flash release to pop the flash up.
- The flash option may be set to **Off**. (p. 39)
- In some modes, the flash is disabled.

When the flash fires unexpectedly

The flash may fire unexpectedly due to static electricity. The device is not malfunctioning.

When the colors in the photo do not match the actual scene

Select an appropriate white balance option to suit the light source. (p. 43)

When the photo is too bright

- Turn the flash off. (p. 39)
- Adjust the ISO sensitivity. (p. 40)
- Adjust the exposure value. (p. 42)

When the photo is too dark

- Turn the flash on. (p. 39)
- Adjust the ISO sensitivity. (p. 40)
- Adjust the exposure value. (p. 42)

When you turn on your device or while you are using the device, it prompts you to enter one of the following codes:

- **Password**: When the device lock feature is enabled, you must enter the password you set for the device.
- **PIN**: When using the device for the first time or when the PIN requirement is enabled, you must enter the PIN supplied with the SIM card. You can disable this feature by using the Lock SIM card menu.
- **PUK**: Your SIM card is blocked, usually as a result of entering your PIN incorrectly several times. You must enter the PUK supplied by your service provider.
- **PIN2**: When you access a menu requiring the PIN2, you must enter the PIN2 supplied with the SIM card. For details, contact your service provider.

Your device displays network or service error messages

- When you are in areas with weak signals or poor reception, you may lose reception. Move to another area and try again.
- You cannot access some options without a subscription. Contact your service provider for more details.

The lens barrel does not retract even when the power is off

When you turn the power off while holding the lens barrel, the lens barrel may not be able to retract into the body. If this happens, do not force the lens barrel into the body. Take the device to your local Samsung Service Center.

The touch screen responds slowly or improperly

If your device has a touch screen and the touch screen is not responding properly, try the following:

- Remove any protective covers from the touch screen. Protective covers may prevent the device from recognizing your inputs and are not recommended for touch screen devices.
- Ensure that your hands are clean and dry when tapping the touch screen.
- Restart your device to clear any temporary software bugs.
- Ensure that your device software is upgraded to the latest version.
- If the touch screen is scratched or damaged, take it to your local Samsung Service Center.

Your device freezes or has fatal errors

If your device freezes or hangs, you may need to close programs or reset the device to regain functionality. If your device is frozen and unresponsive, press and hold the Power button for 6–8 seconds. The device reboots automatically.

If this does not solve the problem, perform a factory data reset. On the Applications screen, tap **Settings** → **Backup and reset** → **Factory data reset** → **Reset device** → **Erase everything**.

The device beeps and the battery icon flashes

Your battery is low. Recharge or replace the battery to continue using the device.

The battery does not charge properly or the device turns off

- The battery terminals may be dirty. Wipe both gold-colored contacts with a clean, soft cloth and try charging the battery again.
- If the battery no longer charges completely, dispose of the old battery properly and replace it with a new battery (refer to your local ordinances for proper disposal instructions).

Your device is hot to the touch

When you use applications that require more power or use applications on your device for an extended period of time, your device may feel hot to the touch. This is normal and should not affect your device's lifespan or performance.

Error messages appear when launching the device

Your device must have sufficient available memory and battery power to operate the camera application. If you receive error messages when launching the camera, try the following:

- Charge the battery or replace it with a battery that is fully charged.
- Free some memory by transferring files to a computer or deleting files from your device.
- Restart the device. If you are still having trouble with the camera application after trying these tips, contact a Samsung Service Center.

Error messages appear when opening music files

Some music files may not play on your device for a variety of reasons. If you receive error messages when opening music files on your device, try the following:

- Free some memory by transferring files to a computer or deleting files from your device.
- Ensure that the music file is not Digital Rights Management (DRM)-protected. If the file is DRM-protected, ensure that you have the appropriate licence or key to play the file.
- Ensure that your device supports the file type.

Another Bluetooth device is not located

- Ensure that the Bluetooth wireless feature is activated on your device.
- Ensure that the Bluetooth wireless feature is activated on the device you wish to connect to, if necessary.
- Ensure that your device and the other Bluetooth device are within the maximum Bluetooth range (10 m).

If the tips above do not solve the problem, contact a Samsung Service Center.

A connection is not established when you connect the device to a computer

- Ensure that the USB cable you are using is compatible with your device.
- Ensure that you have the proper drivers installed and updated on your computer.
- If you are a Windows XP user, ensure that you have Windows XP Service Pack 3 or higher installed on your computer.
- Ensure that you have Samsung Kies 2.0 or Windows Media Player 10 or higher installed on your computer.

A small gap appears around the outside of the device case

- This gap is a necessary manufacturing feature and some minor rocking or vibration of parts may occur.
- Over time, friction between parts may cause this gap to expand slightly.

Some content may differ from your device depending on the region or service provider.

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